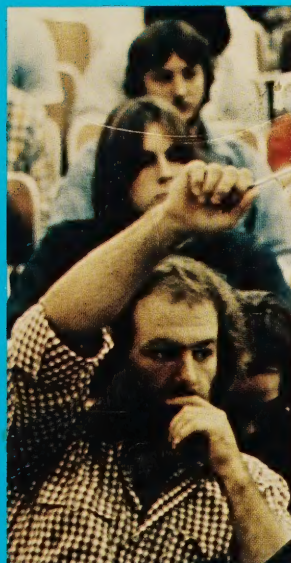




Bröome Community College

Catalog 1978-79



ACCREDITATION

Broome Community College is a member of the Middle States Association of Colleges and Secondary Schools.

The College is supervised by the State University of New York, and its curriculums are registered by the State Education Department.

The Civil, Chemical, Electrical and Mechanical Technology programs are ECPD-accredited engineering technology curriculums. ECPD is the Engineers Council for Professional Development, a national organization of engineering societies.

The Dental Hygiene program is accredited by the Council on Dental Education of the American Dental Association, and the Nursing curriculum is accredited by the National League of Nursing.

The Council on Medical Education of the American Medical Association (AMA) has accredited three other curriculums—Radiologic Technology, Medical Record Technology and Medical Office Assistant, which is also accredited by the American Association of Medical Assistants. The Medical Record Technology program has double accreditation, too, having been approved by the American Medical Record Association as well as by the AMA.

NON-DISCRIMINATION COMMITMENT

Broome Community College, in compliance with Title VI of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, does not discriminate on the basis of race, sex, religion, national origin, age, handicap, color, or marital status in admissions, employment, and treatment of students and employees.

It is the policy and intent of the College, moreover, to comply with Section 504 of the Rehabilitation Act of 1973 as amended, which states:

"No otherwise qualified handicapped individual in the United States, as defined in section 7 (6), shall, solely by reason of his handicap be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

The College reserves the right at any time to make changes deemed advisable or necessary.

For information about the college, its programs, and its admissions procedure contact

Office of Admissions
Broome Community College
P.O. Box 1017
Binghamton, New York 13902

1978-79 Catalog

Broome Community College

Binghamton, N.Y. 13902

A Comprehensive Community College
Supervised by the State University of New York
and
Sponsored by the County of Broome



47 COLLEGE PROGRAMS OF STUDY

DEGREE-GRANTING CURRICULUMS IN 24 FIELDS OF STUDY

OCCUPATIONAL PROGRAMS

The following curriculums are designed to prepare graduates for immediate employment:

Business

- Accounting
- Marketing Management and Sales
- Secretarial
- Executive
- Engineering (Industrial)
- Office Services Assistant

Engineering Technology

- Chemical Technology
- Civil Technology
- Electrical Technology
- Fire Protection Technology
- Industrial Technology
- Industrial Safety and Occupational Hygiene
- Mechanical Technology

Health Sciences

- Dental Hygiene
- Medical Laboratory Technology
- Medical Office Assistant
- Medical Record Technology
- Nursing
- Radiologic Technology

Other

- Child Care
- Criminal Justice — Police
- Individual Studies

UNIVERSITY PARALLEL PROGRAMS

These curriculums are designed to prepare graduates for transfer to four-year colleges and universities in the third, or junior, year:

- Business Administration
- Engineering Science
- Liberal Arts and Sciences

DIPLOMA PROGRAMS IN 17 FIELDS OF STUDY

These programs generally consist of half the number of credits in an associate degree curriculum and are, therefore, the equivalent of one year of college study. Most are given in the evening.

Business with emphasis in:

- Accounting
- Computer Studies
- General
- Management
- Marketing — Sales — Retailing

Child Care

Criminal Justice

Fire Protection Technology

Industrial Technology

- Applied Mathematics
- Chemical
- Civil
- Computer Studies
- Electrical
- General Technical Studies
- Industrial Safety and Occupational Hygiene
- Mechanical
- Production Management

Liberal Arts

CERTIFICATE PROGRAMS IN 6 FIELDS OF STUDY

These programs lead to certificates in areas for which entry-level employment does not require an associate degree, or they consist of a concentration of studies in a particular area which may be up to a year of college work:

- *Basic Electronics
- Data Processing
- Dietetic Assistant
- General Office
- Interior Design
- Legal Secretarial

*Offered jointly with Tompkins-Cortland Community College.

HOW TO USE THIS CATALOG

To help readers find their way through the pages of this catalog, a few words of explanation may be helpful. The catalog is assembled in essentially four parts, as follows:

PART 1, which consists of pages 1-26, contains mostly the policies, procedures and regulations of the College. And as the accompanying table of contents shows, these are divided into such areas as admissions, financial aid, expenses, academic affairs, part-time studies and student affairs.

PART 2, which runs from pages 27-52, is a rundown of the College's programs and curriculums, arranged in alphabetical order. It shows the courses taken by students in each semester, along with the number of class hours, laboratory hours and credits for each. A summary of the field for which each

curriculum prepares its graduates is also included.

PART 3, covering pages 53-92, is a listing of the descriptions of the college's courses. These, too, are arranged in alphabetical order, starting with the Accounting and other business courses.

PART 4, which appears on pages 93-104, is essentially the listing of the administration and faculty of the college. There is also some information about the State University of New York, of which the college is a part, and the College Calendar.

Attention is also directed to the Index on pages 102 and 103. This is an alphabetical listing of the topics covered in the catalog together with the page numbers where one can find them.



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LONG RANGE GOALS

Broome Community College is committed to a broad view of education defined simply as the preparation of people to live in today's complex world.

It is an accepted fact that benefits from our College programs flow to many persons, directly and indirectly. Benefits take many forms. Some are individual and accrue to the direct recipients of community college education. Among the advantages are a higher income, a more satisfying job, greater effectiveness as a consumer, greater ability in allocating time as well as money, direct enjoyment of the educational process and its related activities, and lifetime enhancement of cultural and other experiences.

Some benefits are social and accrue to non-recipients as well as direct recipients of community college programs. Among the gains are greater economic growth based on the general advancement of knowledge and elevation of skills and on the higher proportion of the population in the labor force and the enhanced mobility

of members of the labor force.

Other gains include greater political effectiveness of a democratic society based on the more adequate knowledge and more active participation of citizens; greater social effectiveness of society through the resultant better understanding and mutual tolerance among individuals and groups; the more effective preservation and extension of our cultural heritage; the greater ability of individuals and groups to accept and adjust to rapid change; and the greater potential contribution of educated parents to the welfare of their children.

Broome Community College strives to create a stimulating environment and to shape the College to meet the needs of those it serves. Our College in a democratic way will assist in promoting educational experiences for the student that will lead to the fulfillment of his personal goals; developing within the students a sense of responsibility to themselves and to others; and serving the community by offering flexible curriculums and a variety of resources and activities to meet its needs.

OBJECTIVES

1. In providing equal opportunities in response to community needs and interests:
 - a. Students will identify their academic and vocational strengths and/or interests.
 - b. Students enrolled in career-oriented curriculums will demonstrate competencies required for para-professional, vocational or technical employment.
 - c. Students enrolled in transfer curriculums will plan and execute their programs in order to achieve acceptance and success at a baccalaureate degree-granting institution.
 - d. Students who are disadvantaged in the areas of reading, writing, mathematics and/or study skills may take developmental courses.
 - e. Students interested in continuing education will

- avail themselves of courses for self-improvement, leisure enrichments and lifelong use.
2. The students will participate in a democratic society by supplementing their basic academic commitments and testing their ideas and ideals through active involvement in curricular, extracurricular and community affairs.
3. The community will utilize the College as a cultural, social and educational resource.
4. Members of the faculty and professional staff will assist students in pursuing academic, vocational and personal goals.

These objectives will be achieved through a regular schedule of day and evening classes, a counseling program and other College resources. Students and faculty will engage in a continuous evaluation of students' abilities, accomplishments and interests.

Admissions

The Admissions Office selects students as they apply, complete the admissions process, and are found suitably qualified for a particular program.

Application forms may be obtained from the Broome Community College Admissions Office or from most high school guidance offices. Completing the application and forwarding the necessary information to the College is the applicant's responsibility, not the College's or the high school guidance counselor's.

Completing this form is the first step toward matriculation at BCC, which means that an applicant has been fully accepted into a curriculum and is attending classes. Applicants are advised to look this catalog over carefully to become familiar with the program they choose to enroll in. The chart on page 7 is especially helpful, as it shows the high school subjects required and recommended as preparation for the College's degree offerings.

Acceptance by the BCC Admissions Office applies only for the particular semester designated. If an applicant decides to postpone enrollment to any future semester, he/she must re-apply. To simplify the reapplication process, the Admissions Office keeps applicants' records on file for two years.

Here are a few items to note concerning the application process and requirements:

1. BCC does not require the American College Testing (ACT) or Scholastic Aptitude Test (SAT) score reports. If either or both are available, however, they should be forwarded to the Admissions Office.
2. The application form and instructions have been made as short and concise as possible. This is one of the reasons the State University of New York Application and Guidebook is not used.
3. The application must be accompanied by a \$10 non-refundable fee when it is sent to the Admissions Office, unless the applicant is re-applying or seeking admittance into the Early Admissions program, which is described on page 6.



FULL OPPORTUNITY PROGRAM

By law, BCC is required to admit to some full-time program every applicant who is (a) a resident of Broome County, (b) will be graduated from high school the preceding June or (c) is a veteran of the armed forces. This requirement does not necessarily mean that acceptance will be to the curriculum of the applicant's choice.

To qualify for this consideration, Broome County residents must complete all their application forms and have them and all transcripts turned in to the Admissions Office no later than March 1. After that date, applicants will be accepted regardless of their place of residence, high school graduation date or veterans status.

SPECIAL ADMISSIONS PROGRAMS

Early Admissions is a program for high achieving students who are in high school and can benefit from taking college-level courses, full or part-time, *before* graduating from high school. While high school seniors are usually enrolled in this program, qualified juniors and sophomores may also be eligible.

Anyone interested in part-time Early Admissions, should contact the Admissions Office or his/her high school counselor for the special application form; full-time applicants should use the regular new student application.

The **Educational Opportunity Program (EOP)** is designed for students who are educationally and economically disadvantaged. It provides additional economic aid and remedial or developmental academic assistance. High School guidance counselors or the Admissions Office at Broome Community College can supply further information.

Non-High School Diploma applicants may qualify for a high school diploma by successfully completing 24 credit hours of course work at BCC or any college in a degree, diploma or certificate program. Students currently in high school or those having been out of high school less than one year typically cannot qualify for this program.

Transfer credit for students who have taken or are taking college level course work is subject to the approval of the chairman of the student's major department. Grades earned will not be entered into the cumulative grade-point average at Broome Community College. Students must in all cases submit to the College Admissions Office an official transcript of college level work taken or being taken before formal acceptance will be granted.

Students transferring courses to BCC will be required to complete in credit hours the equivalent to a semester's course of study at BCC for graduation. The determination of this minimum will be the responsibility of the department faculty sponsoring the curriculum, but in no case will the requirement be less than 12 semester credits.



ACADEMIC PREPARATION FOR ADMISSIONS

Curriculum	REQUIRED High School subjects	RECOMMENDED High School subjects
Business Accounting Marketing Bus. Admin. Secretarial		2 units Mathematics incl. Intermediate Algebra 2 units Science College preparatory courses, Typewriting
*Chemical Technology	Chemistry 3 units Mathematics incl. Trigonometry	Additional Mathematics and Science courses Physics, Chemistry
*Civil Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
**Dental Hygiene	1 unit Mathematics Biology, Chemistry	2 units Mathematics Social Studies Typewriting
*Electrical Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses Physics
*Engineering Science	Chemistry, Physics 3½ units Mathematics incl. Advanced Algebra or Pre-calculus Math	Additional Mathematics Science and Technical courses, Computer Programming
Liberal Arts and Sciences		2 units Mathematics 4 units in any combination of science, language or additional mathematics College preparatory courses
*Mechanical Technology	Physics 3 units Mathematics incl. Trigonometry	Additional Mathematics Technical courses
**Medical Laboratory Technology	2 units Mathematics Biology, Chemistry	Additional Mathematics Science courses
**Medical Office Assistant	1 unit Mathematics Biology, Chemistry	Additional Mathematics Science courses Typewriting
Medical Record Technology	1 unit Mathematics Biology	Additional Mathematics Science courses, Chemistry Typewriting
**Nursing	Algebra Biology, Chemistry	College preparatory courses
**Radiologic Technology	2 units Mathematics 1 unit Biology	Additional Mathematics Science courses, Typewriting 1 unit Physics

*Academic units of Mathematics are Regents courses, such as Elementary Algebra, Geometry, 11th year Math or Trigonometry. (For Engineering Science Students, 12th year Math).

*BCC has a developmental program that enables students lacking the proper academic preparation for this curriculum to take courses that will qualify them. They can take these courses at BCC or elsewhere during the summer preceding their enrollment or during the fall and spring semesters, in which case they would need three years to complete the curriculum.

**Academic units of Mathematics are Regents courses such as Elementary Algebra, Intermediate Algebra or Geometry.

**In these programs, Broome Community College gives priority for admissions to Broome County residents who will graduate from high school this academic year or are service veterans.

**Students interested in a degree in a health science curriculum who enter the College in another program are cautioned that there is no guarantee that a petition to transfer will be approved. They should discuss the possibilities with the appropriate department chairperson.

NOTE: The REQUIRED SUBJECTS listed above must be Regents subjects, except for Chemistry in Engineering Science and the science courses in the Health Sciences programs. Regents or general level subjects are appropriate in those instances.

Grades of C (74) or above are necessary in all the preparatory required high school (college) subjects for Dental Hygiene and Nursing applicants and in the biology requirement for Radiologic (X-ray) Technology. A grade of at least 80 is needed in Physics for Engineering Science applicants. All other preparatory required high school (college) subjects must be completed with grades of D (65) or better.

Financial Aid

ESTIMATED EXPENSES FOR ACADEMIC YEAR

In planning to attend BCC, a student should expect the following typical expenses during an academic year. Expenses are given for a 9-month period.

1. Tuition — New York State Residents	\$ 700
— Out of State Students	1400
2. Fees	75
3. Books and Supplies	175

(Costs vary with curriculum)

Estimated Living Expenses

	Commuting Student Living at Home and Dependent on Parents	Resident Student Living Away from Home and Dependent on Parents	Single Student Self-Supporting	Married Student Self-Supporting
4. Room and Board	\$ 800	\$1944	\$2655	\$3060
5. Personal Expenses	400	400	525	787
6. Transportation	275	275	648	765
7. Lunches at School	320			
TOTAL BUDGET (1 through 6)	\$2745	\$3569	\$4778	\$5562

*Consideration is given for expenses incurred by parents for maintenance costs for students living at home.

Out of State Students add \$700 to total budget.

— ALL COSTS ARE SUBJECT TO CHANGE —

Considerable financial aid is available to students of Broome Community College, and the College maintains a Student Financial Aid Office to help students in this area. Information and applications for financial aid are sent to students who are seeking full-time enrollment when they apply for admission. Part-time day and evening students enrolled in at least 6 credit hours working toward a degree are also eligible to apply for financial aid. Part-time students may receive information/application by contacting the Student Financial Aid Office.

Financial aid at BCC falls into three broad categories —grants, loans, part-time employment. Assistance usually comes from a combination of these resources commonly referred to as a "financial aid package."

STUDENT AND FAMILY RESOURCES

The College offers financial assistance to help students who still have need after family resources are taken into consideration. To determine a realistic family contribution, the College subscribes to the services offered by the College Scholarship Services (CSS).

The Financial Aid Form (FAF) is the official document for submitting a statement of financial resources to CSS. This form may be obtained through the local high school guidance office or the College Financial Aid Office. A CSS brochure entitled "Meeting College Costs" is sent to all applicants to assist in estimating how much aid is needed. This brochure is available to the general public at the Financial Aid Office and will be provided upon request.

HOW TO APPLY FOR FINANCIAL AID

All students must apply for financial aid each academic years.

Federal and State Gifts

All financial aid applicants will be expected to apply for two major sources of financial aid — the Federal government's Basic Educational Opportunity Grant (BEOG) and the State's Tuition Assistance Program Award (TAP). Although the College provides information, applications and assistance, these funds are not generated by the College and must be applied for directly by the student to the agency. Further information regarding these and other problems is available at the Financial Aid Office (Wales Building, Room 101).

College Administered Financial Aid

To be considered for financial aid administered by the College, parents of dependent students and self-supporting students must submit the Financial Aid Form (FAF) to the College Scholarship Service and the College Application for Financial Aid to the Financial Aid Office. By filing the forms outlined above, students will be considered for these financial aids, about which further information is available at the Financial Aid Office (Wales Building, Room 101).

Federal

- National Direct Student Loan
- College Work Study
- Supplemental Educational Opportunity Grant
- National Nursing Loan
- National Nursing Scholarship

Institutional

- BCC Foundation Grant

The college administers a number of programs which have been established by private individuals, companies, and organizations. These scholarship and grant programs have varying eligibility requirements. Students who wish to apply for these special scholarships may request an application from the Financial Aid Office.

Priority Funding Dates

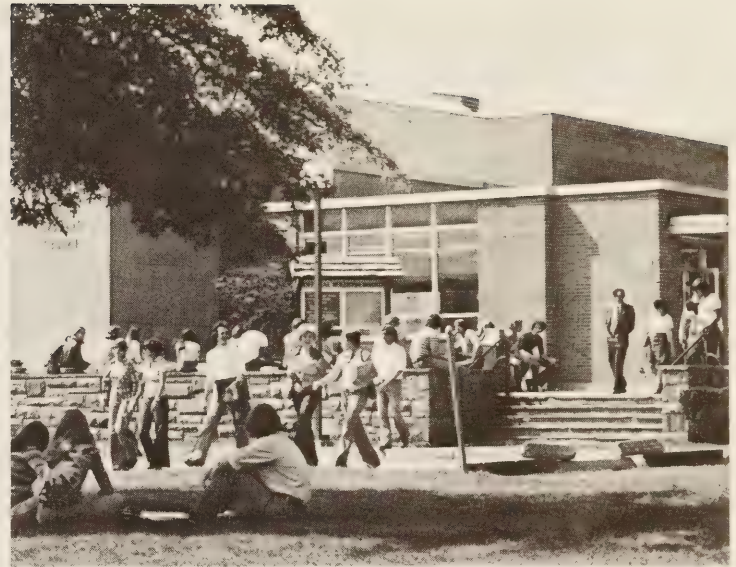
Fall Semester April 15

Spring Semester December 1

Incoming students should apply for financial aid when they apply for admissions. Because all college-based funds are limited, students are strongly encouraged to submit the appropriate forms far in advance of the above priority dates.

Completed applications received prior to April 15 will be given first priority. Applications received after this date will be considered as long as funds are available.

FAF should be mailed to College Scholarship Service before March 1 to be received at the College by April 15.



Notification of Decisions

Students are generally notified of the action taken on their application shortly after April 15. Students who apply late will be notified as folders are completed. A brochure explaining students' rights and responsibilities is sent to all financial aid recipients at the time the award is made. Interested students may receive a copy of this brochure before an award is made by contacting the Financial Aid Office.

If a student's request for aid is denied, the reasons for the decision are explained. Students may request an appeal on financial aid decisions by writing a letter to the Vice-President for Student Affairs.

Reasonable Academic Progress

Any student who is dismissed from the College for not making reasonable academic progress may be re-admitted on a probationary status for the next semester. These students may not receive Federal financial aid until they have removed the probationary status. (Retroactive payments are sometimes possible). By achieving a 1.8 grade point average in at least 50% of the credits taken, students can remove themselves from probation.

ADDITIONAL FINANCIAL AID INFORMATION IS AVAILABLE IN THE COLLEGE FINANCIAL AID OFFICE (Wales Building, Room 101), such as brochures from the Office of Vocational Rehabilitation (OVR) and Social Security.

Expenses

Tuition and fees are payable at the Finance Office prior to each semester's registration according to a payment schedule released by the College.

TUITION

STUDENTS CARRYING 12 OR MORE CREDIT HOURS—considered full-time students.

For New York State residents	
With residency certificate	..... \$350 per semester
Without residency certificate	..... \$700 per semester
For out-of-state residents	..... \$700 per semester

After acceptance by the College, the student will be billed for an advance payment of \$50. This will be applied toward the tuition payment for the first semester but it will not be refunded should the student withdraw either before or after registration.

The responsibility for payment of tuition rests upon the student, who will be billed prior to the start of each semester. Students will not be allowed to register or will be dismissed if the established due dates for payment are not met.

STUDENTS CARRYING LESS THAN 12 CREDIT HOURS—considered part-time students.

For New York State residents	
With residency certificate	..... \$27 per credit hour
Without residency certificate	..... \$54 per credit hour
For out-of-state residents	..... \$54 per credit hour

SEE TUITION REFUND POLICY ON PAGE 11

RESIDENCY CERTIFICATE

To qualify for the resident tuition fee, a student is required by law to present once each academic year on or before registration a residency certificate indicating that he or she has been a legal resident of the State of New York for one year and of a county for six months.

Broome County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. This application must be completed and presented at the time of tuition payment.

Out-of-County Residents—Full-time students admitted to the College will be mailed a copy of the application for residency certificate prior to registration. The application must be completed, notarized and presented to the **County Treasurer of the County in which the student resides**. The County Treasurer will then issue a residency certificate to the student. This residency certificate must be presented at the time of tuition payment.

Part-time students must meet the same requirements as stated above. The application for residency certificate form is available at the Finance Office and the Office of Continuing Education.

The completed residency forms are required once each academic year.

Failure to comply with this requirement will result in paying double tuition, not to exceed the limitations cited above.

SEE PAGES 8 AND 9 FOR FINANCIAL AID

FEES

STUDENT ACTIVITY \$25 per semester

The activity fee entitles full-time day students to admission to varsity games, dances and parties, as well as a subscription to the student newspaper and the opportunity to participate in a varied program of co-curricular activities, including intramural athletics. Students will be billed \$25 at the start of each semester.

All part-time students (those taking fewer than 12 credit hours) pay a \$2 student activity fee per semester. This entitles them to admission to convocations and to issues of The Fulcrum, the student newspaper. It does not include, however, admission to varsity sports events or membership in student organizations or to copies of The Citadel, the student yearbook. The student has the option though of paying \$25 per semester and receiving the same activity privileges as full-time day students.

SEE FEE REFUND POLICY IN NEXT COLUMN

ACCIDENT INSURANCE AND HEALTH FEE \$15 per year

Mandatory fee for all full-time day students for accident (\$9 per year) and health (\$3 per semester). Money collected from this fee is used to provide physicians services, drugs and medical supplies maintained in the Health Service for student use. The fee is non-refundable if a student withdraws from the college.

The accident policy covers the student for 12 months commencing August 28, 1978 for expenses incurred as a result of any accident, on or off campus. Maximum coverage is \$1000 per accident. Claim forms are available in the Health Service during the academic year and from the Vice-President for Student Affairs in the summer.

Students who withdraw and wish a refund of their accident policy must apply directly to the Insurance Company. This information is available either in the Finance Office or in the Health Service.

Compulsory Health Service Fee for

Part-Time Day Students \$1 per semester

GRADUATION \$13

Paid during the semester preceding graduation and is refundable if the student does not graduate.

CHEMISTRY LABORATORY \$5 per semester

For all students taking chemistry laboratory courses with 200 numbers.

APPLICATION \$10

CREDIT BY EXAMINATION 20

LATE REGISTRATION-PAYMENT FEE 10

RETURNED CHECK FEE 5

TRANSCRIPT FEE 1

(No charge for first transcript)

For Part-time Evening Students

DIPLOMA FEE \$ 8

CERTIFICATE FEE 8

STUDENT ACTIVITY FEE 2

MEDICAL INSURANCE

The College does not provide medical insurance, but it is available through a number of insurance companies including Blue Cross/Blue Shield.

ALUMNI LIFETIME MEMBERSHIP \$20
Membership in the Broome Community College Alumni Association is optional. The lifetime dues are payable during the semester preceding graduation, and they entitle graduates to complete Association benefits.

Refund Policies, Procedures

TUITION REFUND POLICY

Students who withdraw from classes during the first three weeks of a semester will be entitled to tuition refunds on the following basis—100% refund during the first week, 50% during the second week and 25% during the third week. After three weeks of classes there will be no refunds. See College Calendar on page 104 for additional information on dates for tuition refunds.

FEE REFUND POLICY

The student activity fee is refundable according to the same schedule as tuition. See "Tuition Refund Policy" above.

REFUND PROCEDURE

An application for refund of tuition and fees must be made in person and in writing in the Registrar's Office (W-206). The application must be on the College form provided. The date on which the application is filed is considered the official date of the student's withdrawal and any refund to which the student may be entitled is computed using that date.

Books, Supplies, Uniforms

Students provide at their own expense the necessary books and instructional materials. These may be purchased at the College Book Store maintained by the Faculty-Student Association for the convenience of the students. The cost varies, depending on the curriculum, from about \$170 to \$300 per year.

In the Health Science curriculums students will provide, at their own expense, their own transportation to off-campus locations for necessary clinical and other experience.

In addition, some curriculums require uniforms. Among these are Nursing, Radiologic Technology, Medical Laboratory Technology and Medical Office Assistant. Gym clothes are necessary for physical education classes. Dental instruments and uniforms for Dental Hygiene students cost approximately \$350 to \$400.

Students spend time between classes in The Union, where they can relax by playing such games as ping pong, billiards, foos-ball or cards or just relax in the lounge by watching TV or sitting and chatting with friends.



Academic Affairs

REQUIREMENTS FOR GRADUATION

COMMON REQUIREMENTS FOR ALL THREE DEGREES GRANTED BY THE COLLEGE:

1. A 2.00 cumulative GRADE POINT AVERAGE in those courses applicable to the degree.
2. Recommendation of the faculty for the awarding of the degree.
3. Satisfaction of all obligations to the College.
4. The minimum number of credits for graduation as determined by each academic department. It may not be less than 60, the state minimum.

THE ASSOCIATE IN APPLIED SCIENCE DEGREE (AAS)

This degree is awarded to graduates of curriculums in these fields of study:

Accounting
Chemical Technology
Child Care
Civil Technology
Criminal Justice — Police
Dental Hygiene
Electrical Technology
Engineering (Industrial) Secretarial
Executive Secretarial
Fire Protection Technology
Individual Studies

Industrial Safety and Occupational Hygiene
Industrial Technology
Marketing Management and Sales
Mechanical Technology
*Medical Laboratory Technology
Medical Office Assistant
Medical Record Technology
Nursing
Office Services Assistant
*Radiologic Technology

5. Curriculum Requirements
 - a. The minimum number of credits in a student's major field as determined by each academic department. These are courses intrinsic to and required by the various curriculums.
 - b. A minimum of 20 credits in Liberal Arts and Sciences courses will include:
 - 1) Social Sciences: a minimum of 6 credits
 - 2) Natural and Physical Sciences (including mathematics): a minimum of 6 credits
 - 3) Humanities: a minimum of 6 credits in English (may include a maximum of 3 hours in speech)
 - c. Satisfactory completion of all courses in a curriculum or as approved in a department.
 - *d. Summer clinical experience required for graduation in curriculums noted.

THE ASSOCIATE IN SCIENCE DEGREE (AS)

This degree is awarded to graduates of the Business Administration, Engineering Science and Individual Studies curriculums and the Science Option in Liberal Arts and Sciences.

5. Curriculum requirements:

- a. At least 30 credits in the humanities, natural sciences, mathematics, the social sciences.
- b. Physical Education—2 credits (for Liberal Arts and Engineering Science students only).

THE ASSOCIATE IN ARTS DEGREE (AA)

This degree is awarded to graduates in the Liberal Arts and Sciences curriculum.

5. Liberal Arts and Sciences requirements distributed as follows:

- a. English: a minimum of 12 credits, of which 6 shall be in composition and 6 in literature.
- b. History: a minimum of 6 credits in approved courses.
- c. Humanities: a minimum of 6 credits (6 in philosophy or 6 in a foreign language).
- d. Mathematics: Students who have completed fewer than 3 units of secondary school mathematics (through 11th year math) are required to take 2 semesters of college level mathematics. . . . Students who have completed 3 units of secondary school mathematics (through 11th year math) are required to take one semester of college level mathematics. . . . Students who have completed more than 3 units of secondary school mathematics (including 11th year math) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.
- e. Natural and Physical Sciences: a minimum of 8 credits.
- f. Social Sciences: a minimum of 6 credits.
- g. Electives: 16 credits minimum. A maximum of 12 credits may be taken outside the offerings in Liberal Arts and Sciences with the approval of the dean of the division.
- e. Physical Education: 2 credits. Exceptions to this requirement may be made by the dean of Liberal Arts for valid reasons.
- i. Satisfactory completion of all courses in a curriculum or as approved in a department.

PROGRAMS OF THE COLLEGE DEGREE PROGRAMS

Graduates of Broome Community College receive associate degrees, and the courses of study fall into four general categories—technical, business, liberal arts and health sciences. Liberal arts courses are included in all curriculums, as it is believed that students need more than technical competence to understand people and their daily working and personal inter-relationships.

Applicants to the College should consider carefully the type of program they wish to pursue, for the nature of the offerings makes it difficult for a student to switch from one curriculum to another after commencing studies.

Engineering and Engineering Technology

In the area of technical education, the College offers five programs. One, Engineering Science, is in effect the first two years of an engineering curriculum, and students who do satisfactory work in it should experience little difficulty in transferring to engineering colleges at the third-year level.

The other four are designed to train engineering technicians in the fields of Chemical Technology, Civil Technology, Electrical Technology and Mechanical Technology. Students in these programs are prepared for employment in various types of technical work immediately after graduation.

In addition, the College offers two programs for part-time students in the evening. These are Industrial Technology, which has six major areas of study to choose from, and Fire Protection Technology.

Business

The Business curriculums are designed primarily to prepare graduates for immediate employment in one of six fields—Accounting, Marketing Management and Sales, Engineering Secretarial, Executive Secretarial and Office Services Assistant. In addition, there is a seventh option, Business Administration, that combines more university parallel preparation with a minimum of job-oriented courses. This program is intended for the person who plans to continue his/her college education for a baccalaureate degree, even though he/she may want to work for a while before transferring to a four-year college.

It is possible to transfer from all programs. But because each student's transfer credits are evaluated by the four-year institution, the number of credits accepted can vary.

Liberal Arts and Sciences

University parallel curriculums in Arts and Sciences prepare students for transfer to four-year colleges or universities. While the aim of liberal learning is to broaden human perspective and deepen understanding through study of philosophy, history, literature and the arts, students who identify career/professional goals early can begin to develop appropriate academic concentrations. Liberal Arts and Sciences also offers degree programs for those seeking immediate employment. Please refer to the Career Models on page 41 in this catalog.

Health Sciences

Opportunities for men and women interested in the health sciences field are provided in six areas—Dental Hygiene, Medical Office Assistant, Medical Record Technology, Nursing, Medical Laboratory Technology and Radiologic Technology. Graduates are prepared to work immediately after graduation in physicians' or dentists' offices, laboratories or hospitals.

Graduates of these programs are also qualified to take whatever licensing examinations their professions require.

Others

The College offers degree opportunities in four other academic areas—Child Care, Criminal Justice, Individual Studies, Industrial Safety and Occupational Hygiene. All lead to the Associate in Applied Science degree, and individual Studies students may earn either that degree or the Associate in Science, depending on their program of study.

DIPLOMA AND CERTIFICATE PROGRAMS

Broome Community College also has diploma and certificate programs, which are less than two years in length and have more specific objectives than the associate degree offerings. Most of them are the equivalent of about one year of college work and carry college credits. A listing of these programs appears on page 52 of this catalog.

GRADING INFORMATION

Grading Philosophy

Education is intended to be a refined and efficient process of learning. Although each individual learns to some degree from his life experience, the planning, organization and guidance provided within a course of study emphasize: (1) the important phases of learning; (2) the integration of knowledge into a meaningful whole; and (3) the acquisition of knowledge and skills.

Broome Community College's grading practice focuses on **success** and **achievement**.

Grades

Honor Points Per		
Grade	Credit Hour	Explanation
A	4	Outstanding Achievement
B	3	Significant Achievement
C	2	Satisfactory Achievement
D	1	Minimal Satisfactory Achievement
AU	—	Audit
NC	—	No Credit
I	—	Incomplete Work

Mid-Term Grades

"NC" grades and D's may be reported to the student and his adviser at mid-term.

Incomplete Grades "I"

When a student receives an I grade, he/she shall within two weeks after the beginning of the next regular semester contact his/her instructor and make arrangements which shall include a time limit (not to exceed one year) in which the work will be completed. The instructor will notify the director of records of the arrangements and when the student has completed the work notify the director of records of the grade to be assigned. If the student does not meet the time limit, the instructor shall notify the director of records to record an NC grade.

If the student does not contact the instructor in the two-week period at the beginning of the semester, the director of records shall automatically record an NC grade.

Audit

Students are encouraged to use the option of taking courses on an audit basis. Any student who completes a course by auditing will receive the grade AU on his/her record in place of credit grades. He/she may not receive credit for it later unless he/she re-registers in the course or challenges it according to the existing rules for credit-by-examination.

Students who register in a course for audit are expected to have the necessary prerequisites. In this respect students are encouraged to make full use of the College's counseling services, but the ultimate decision whether or

not to enroll for audit shall be the student's responsibility. Consideration may be given to a student's request for transfer from credit to audit status or vice-versa. The end of the third week of classes is the deadline for such transfer.

Full-time students may audit courses with no additional charge, but they need approval of their department chairperson. For part-time students, the regular tuition schedule applies (\$27 per credit hour for New York State residents and \$54 per credit hour for out-of-state students). New York State residents who are 60 years of age or older may audit non-laboratory courses without charge on a space available basis.

DEVELOPMENTAL STUDIES

A significant number of incoming freshmen (full and part-time students) enter college with inadequate preparation in basic skills — reading, writing, and mathematics. Because of this, some will need more than four semesters of full-time study to earn an Associate Degree. Broome Community College takes seriously its obligation to assist students with such deficiencies. Here are some important features of our program:

Diagnostic Testing: Every entering full-time student is given a battery of diagnostic tests — one in reading, one in writing, and one in mathematics. Part-time students are also encouraged to take these tests.

Course Placement: Following an analysis of student performance on these tests, individual advice is given on course selection. Every effort is made to place students in courses in which they can succeed.

Credit/Non-Credit: Some of these courses are credit-bearing and others are not. Typically, students with skills deficiencies will have a schedule which includes both credit and non-credit courses. Students must pay close attention to catalog information pertaining to these courses and consult their curriculum chairpersons on acceptability of credit.

The Courses:	Catalog Page	Title	Credit	Comment
ENG 100	69	Basic Language Skills	3	As advised: satisfies half the composition requirement
RDG 010	88	College Reading	0	As advised
RDG 110	88	Rapid Reading	1	Elective Credit
RDG 120	88	Speed Reading	1	Elective Credit
LRS 101	88	Learning Skills: Time Scheduling & Concentration	.5	Elective Credit
LRS 102	88	Learning Skills: Remembering, Forgetting and Exams	.5	Elective Credit
LRS 103	88	Learning Skills: Textbook Mastery	.5	Elective Credit
LRS 104	88	Learning Skills: Listening, Notetaking	.5	Elective Credit
MAT 003 A, B, C	75	Basic Math Review	0	As advised
CHM 102	58	Preparatory Chemistry	0-2	As advised
PHY 100	85	Preparatory Physics I	0-2	As advised
PHY 101	85	Preparatory Physics II	0-2	As advised
SAC 295	73	Seminar in Human Potential	0-3	As advised

Developmental Centers

The skills centers are staffed by experienced professionals who are knowledgeable about and committed to assisting students with their learning problems. The Learning Resource Center houses the three developmental centers:

Mathematics — Basement
Reading — Second Floor
Writing — Second Floor

OTHER ACADEMIC PROCEDURES

Dismissal from a Degree Program

A student must demonstrate discernible progress toward achieving a degree in a given program. After official enrollment in eleven semester hours of course work, a student must maintain a grade of "C" or better in 25% of his/her cumulative semester hours. Otherwise, he/she will be dismissed from the program of study. A student is officially enrolled if he/she is registered for credit in a course after the third week of classes.

In considering a student's petition for immediate re-admission after having been dismissed from a degree program, a two-fold process will be utilized. A student's petition will initially be acted upon by either a departmental or divisional committee. If additional action is requested, the petition may then be acted upon by the Vice-President of Academic Affairs.

Withdrawal from Courses

If a student withdraws from a course before or during the third week of classes, no record of withdrawal will appear on the transcript. However, if a student withdraws after the third week of classes, the date and an "NC" (no credit) will appear on the transcript.

Withdrawal from the College

Broome Community College has committed itself to a philosophy of providing whatever assistance is necessary to aid the student in completing his/her academic goals. Students are strongly encouraged to seek academic and personal counseling prior to any withdrawal.

Students who decide to withdraw from the College must complete the proper termination forms available in the Registrar's Office or Counseling Center. Failure to comply may cause the individual to lose any possible refund of fees.

Repeating Courses

A student who wishes to repeat courses already taken at Broome Community College must secure permission of the department chairperson.

When a student repeats a course to improve a grade previously received, the higher grade will be used to compute the cumulative grade point average.

Attendance Regulations

Attendance in all scheduled course activities is expected as part of each student's responsibility for his/her own education. The policy of the College is that the student's academic achievement will determine grades and not just the statistics of presence or absence.

Student Responsibility: Each student is responsible for any work missed regardless of reason for any absence in class.

Instructor Responsibility: Each instructor is responsible for relating the significance of attendance to the

course's objectives and to inform the students of this significance in the first class meeting.

Department Responsibility: Within the spirit and framework of college policy, each department may develop its own guidelines to meet its needs. Such guidelines are subject to the approval of the vice-president for academic affairs.

Absence Due to Religious Beliefs

Section 224-a of the State Education Law reads:

1. No person shall be expelled from or be refused admission as a student to an institution of higher education for the reason that he is unable, because of his religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.

2. Any student in an institution of higher education who is unable, because of his religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or any study or work requirements.

3. It shall be the responsibility of the faculty and of the administrative officials of each institution of higher education to make available to each student who is absent from school, because of his religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which he may have missed because of such absence on any particular day or days. No fees of any kind shall be charged by the institution for making available to the said student such equivalent opportunity.

4. If classes, examinations, study or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study or work requirements held on other days.

5. In effectuating the provisions of this section, it shall be the duty of the faculty and of the administrative officials of each institution of higher education to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this section.

6. Any student, who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section, shall be entitled to maintain an action or proceeding in the supreme court of the county in which such institution of higher education is located for the enforcement of his rights under this section.

6-a. A copy of this section shall be published by each institution of higher education in the catalog of such institution containing the listing of available courses.

7. As used in this section, the term "institution of higher education" shall mean schools under the control of the Board of Trustees of the State University of New York or of the Board of Higher Education of the City of New York or any community college.

CREDIT BY EVALUATION

The Counseling and Student Development Center is the initial contact point for students interested in obtaining information about non-traditional study, examination programs, and their suitability for students' goals.

Broome Community College will evaluate learning that has been obtained through non-traditional methods and various examinations that can be documented:

Advanced Placement Examination (AP)

The College will recognize for credit the AP examinations of the College Entrance Examination Board. A score of 3 or above is acceptable for credit upon departmental approval. Laboratory courses may require additional lab work for full credit for a college course. Credit awarded will be handled as transfer credit.

College Proficiency Exams (CP)

The CP exams of the University of the State of New York will be recognized for credit upon approval by the appropriate department. Credit awarded will be handled as transfer credit.

College Level Examination Program (CLEP)

The College will recognize successful achievement at or above the 50th percentile on CLEP exams in accordance with SUNY and American Council of Education guidelines. Approval of credit for degree requirements or electives is determined by the appropriate department. Credit approval will be handled as transfer credit.

BCC Credit By Examination (CBE)

The College in many instances will provide credit by examination for knowledge gained outside the traditional classroom situation. Guidelines for this procedure are available from the College's department chairpersons. There will be a fee of \$20 for the exam. If a BCC student receives an NC grade after normal completion of a course, no credit by examination may be given in that subject for that given grading period.

Special Individual Assessment

The College will evaluate for credit various types of learning acquired outside the usual classroom environment. Particular criteria for awarding credit may be applied by an academic department. Approval of credit is the responsibility of the appropriate department. Students must identify what has been learned.

Special Assessment of

Group Sponsored Learning

The College will evaluate for credit various types of learning acquired through participation in learning experiences or training provided by businesses, industry, unions, professional societies, governmental agencies or the military. Particular criteria for awarding credit may be applied by an academic department, and approval of credit is the responsibility of the department.



THE CECIL C. TYRRELL LEARNING RESOURCES CENTER

The Cecil C. Tyrrell Learning Resources Center provides a wide variety of learning resources. Housed in the center are the Library, the Audio Visual Department, the Mathematics Learning Center, the Writing Center, the Reading and Study Skills Center and an Engineering Sciences and Technologies Learning Center, as well as offices and classrooms.

A staff of professional, technical and clerical specialists offers the students a broad range of services designed to meet their academic needs. Typical library services include lending of materials, information services, access to other learning resource centers, interlibrary loan service, assistance in research techniques, and instruction in the use of materials and equipment. A coin operated photocopier is also available.

The Learning Resources Center's primary function is to support and supplement the academic programs of the college and to provide a center for serious study, research and learning. Students are encouraged to use its facilities, materials, and services fully but properly. Requests for information services and assistance are welcomed by the staff.

The facilities have a capacity of nearly 900 users. Individual carrels, lounge furniture, multiple person tables and stools, and a limited number of small group study rooms are available. Audio-visual equipment including

projectors, tape and record players, micro-film reader/printers, as well as more specialized machines, are located in the center for student use. Some electric and manual typewriters are also available.

The Learning Resources Center was constructed in 1967-68 and named for the College's founding president in 1972, the year he retired after 26 years in the position. The building is an attractive and modern three-story structure, with more than 40,000 square feet of space devoted to its learning facilities.

The Learning Resources Center collections offer many different types of print and nonprint materials carefully selected to meet the academic needs of students at college level. The print collections consist of over 50,000 books, 450 current periodicals and backfiles, plus over 6,000 pamphlets.

More than 1,000 audio recordings, slides, filmstrips, maps, microforms, multimedia kits, and other types of media add several thousand more items to the collection. An extensive file of college catalogs is maintained.

Most materials including magazines may be borrowed for use outside the center, although some restrictions are placed on reference and reserve materials. The basic loan period for books is two weeks, and for magazines and audio visual materials, one week.

Some loan periods may be extended if requested

before the date the materials are due back in the center and the items not in demand. Overdue fines are not charged as a rule, but the college reserves the right to do so with proper notification.

Library cards will be issued to students upon request, but are not required for borrowing materials. Proper identification is necessary, however. Failure to return borrowed materials promptly upon notice can result in withholding of grades, transcripts and other services.

Lost and damaged materials must be replaced or paid for at current replacement costs, and the borrower is responsible for all materials charged out on his/her card.

The center is open for full service during the following hours:

Fall and Spring Semesters

Monday — Thursday	8 am to 10 pm
Friday	8 am to 4:30 pm
Sunday	4 pm to 10 pm

Saturday hours may be added if usage warrants.

Holiday and Intersession

Monday — Thursday	8 am to 5 pm
Friday	8 am to 4:30 pm

Summer Session

Monday, Wednesday, Thursday	8 am to 9 pm
Tuesday	8 am to 5 pm
Friday	8 am to 4:30 pm

STUDY ABROAD PROGRAMS

Broome Community College is a member of the College Consortium for International Studies, a group of 30 colleges spreading geographically from Canada to Florida and from California to Maryland. This consortium, during the 1978-79 academic year, will offer students a total of 65 overseas academic programs in 27 foreign locations.

The programs range from structured, formal courses at affiliated schools and institutions abroad, to service-learning and contract-independent study courses. Students may choose from intercession, short-term, semester and year-long programs.

Formal Programs

The consortium provides formal, structured programs lasting for a semester, a year or two years, in a variety of institutions in Denmark, England and Israel. Students study a full semester program (usually 15 to 18 credits) that is arranged prior to their departure at affiliated schools, institutions, colleges or universities abroad. The subject areas range from liberal arts courses to specialized programs, such as criminal justice, languages and human services. Programs are also available in Spain and Germany.

Many BCC students will find their academic and personal lives enriched through a cultural experience difficult to match in a conventional two-year course of study in this country. BCC maintains close communication with consortium offices in New York, London and Jerusalem to facilitate the placement of students in qualified institutions abroad.

Contract/Independent Study

Students studying independently enter into contractual arrangements with their mentors representing the institution. The students, guided by their mentors, identify the specific learning objectives for their contract and specify the learning activities through which these objectives are to be obtained. Learning activities may include individual and group seminars and tutorials, assigned readings and/or formal classes.

In addition, the learning contract clearly spells out the evaluation procedures to be followed; usually a combination of papers, examinations, projects, tapes. The evaluation methods, as all contract components, are agreed upon in advance (and prior to the student's departure for his study program abroad) and can be altered or modified only by mutual agreement by the mentor and student.

BCC's contract programs provide students with an avenue to benefit from unstructured learning and individual guidance while studying abroad. It should be noted that contract learning, particularly when engaged in overseas, is a very rigorous academic undertaking that requires imagination, self-discipline, planning and foresight in addition to the usual qualities of a good student. It should be considered only by serious students.

Intercession, Short-Term Programs

During each academic year the consortium conducts a wide variety of intercession and short-term programs in January, during the spring recess and in the summer months. Students at BCC who have been introduced to study abroad through these short-term programs, usually two to three weeks in length, often then decide to study overseas for a semester or year.

The short-term courses have grown in scope, as well as in number. They have enabled criminal justice students to study and compare the operations of the metropolitan police forces of Amsterdam, Paris and London. Other short-term program participants have had a chance to evaluate child welfare practices in the Scandinavian countries, or compare the nursing and health care practices in Israel to those in the U.S.

Admission to Programs

Admission to the College does not automatically insure admission to BCC's programs overseas; separate application must be made to the consortium. Students will be evaluated on their academic ability, motivation, maturity and potential adaptability to a foreign culture. In addition to BCC approval, interviews with personnel from affiliate consortium institutions may be required.

Credits, Transcripts and Tuition

Students register at BCC and pay the appropriate tuition, which in many cases covers the instructional costs abroad. Students are monitored through consortium offices in London and Jerusalem, or through individual mentors. Upon the successful completion of the formal program or after fulfillment of the contract, students will receive a BCC transcript reflecting the grades achieved or the course equivalents or the work done through the contract, greatly facilitating transfer of credits to other American institutions.

Students may earn up to 18 credits per semester, leading to an associate degree. Credits for intercession/short-term programs range from one to six, depending on the time spent abroad and the instruction offered in the program.

For additional details about any of the above programs, students should contact the Study Abroad Program Office at Broome Community College (Titchener Hall, Room 105 — Phone (607) 772-5094).

Student Academic Appeal Procedure

Broome Community College has established a procedure to provide students an opportunity to appeal grades in any particular course(s) or academic dismissal. Copies of this Student Academic Appeal Procedure are available in the Office of the Dean of Academic Services (W-202), and the policy also appears in the Student Handbook.

Late Registration

An applicant may not register later than one week after the beginning of each semester except by permission of the Vice-President for Academic Affairs. A late fee will be charged.

Length of Curriculum

All associate degree programs are designed to be completed in two years. The college year is divided into two semesters of 15 weeks each plus an evaluation week. Students with academic deficiencies may need to spend longer than four semesters to earn their degrees. Radiologic Technology students and Medical Laboratory Technology students have special clinical laboratory experience in the summer of both their freshman and senior years.

Independent Study

Many academic departments of the College offer "Independent Study" courses which are arranged between an individual faculty member and a motivated student. The student has the responsibility to make appropriate arrangements with a faculty mentor and to secure the permission of the department chairperson before registering for independent study.

Independent Study courses are **not** intended to replace regular courses which the student was unable to schedule or which he did not complete. Rather, these courses provide an opportunity for the serious student who desires to expand his academic background beyond the scope and the depth usually found in a regular course. (See course description section for offerings.)

CO-OPERATIVE PROGRAMS WITH SUNY BINGHAMTON

Full-time Broome Community College students have the opportunity to take courses without additional tuition at The State University Center at Binghamton, located approximately 10 miles west of the BCC campus. Two programs are available, cross-registration and joint degree.

BCC students may cross-register at Binghamton for one course each semester. The courses for which they cross-register must be courses that are not available at Broome Community College.

The joint-degree program enables students in SUNY Binghamton's Bachelor of Arts degree program to simultaneously earn an Associate in Applied Science degree at BCC.

Additional information on these two programs is available in the office of the Dean of Academic Services (Wales Building, Room 202).

Part-Time Studies

MEETING MANY NEEDS

People often think that higher education is available only for recent high school graduates. Broome Community College tries to reach out and meet the educational needs of ALL the people in Broome County. "Community" is part of the College's name and a large portion of its mission. BCC is concerned about meeting the needs of the part-time student, as well as those enrolled full time.

Anyone in the community may enroll as a part-time student, and BCC attracts a large number each year. The fall 1977 enrollment, for example, was almost 2,000 men and women, most of them for evening classes as they are largely adults who work during the day. In recent years the College has also increased its enrollment of part-time day students, and the total was more than 400 last fall.

PART-TIME STUDENTS

. . . are those who take fewer than 12 credits per semester, usually one or two courses. At BCC, part-time students can:

- Enroll in credit or non-credit mini courses.
- Take day courses, evening classes or both.
- Attend classes in the fall, spring or summer semester.
- Earn a degree or not, as they see fit. Certificate and diploma programs are also available.
- Apply for financial aid — if carrying more than 6 credits.
- Receive academic advice and personal counseling.
- Leave their children at Kinder Kare.
- Find other students over 21.
- Borrow books from the College Library.
- Carry one, two or three courses.
- Relax in the lounge for students over 21.
- Belong to the Student Association.
- Receive Veterans' benefits.
- Transfer credits to BCC earned at another college.

Many firms have a tuition-reimbursement plan that pays all or part of an employee's tuition and costs if his/her courses are job-related.

The College conducts a special Information Session for new part-time students at the beginning of the fall and spring semesters to inform prospective students what programs are available, how to register, how to get started at BCC, and to answer their many questions.

The BCC Office of Continuing Education caters to the needs of part-time students.

BCC can design special courses for industry or community organizations or offer courses at off-campus sites — in your plant or your community.

For details on these programs, contact the Office of Continuing Education (Wales Building, Room 108 or call 772-5012).

SPECIAL OFFERINGS FOR PART-TIME STUDENTS

Mini Courses

These are non-credit courses, usually three or six weeks in length, running one evening per week. They cover a wide range of topics that may be employment related, directed toward hobbies or just subjects of general interest, and they have no homework, no exams and no grades. The College publishes printed bulletins each fall and early spring with a full listing of offerings. These mini courses have attracted more than 4,000 students a year in recent years.

Workshops and Seminars

The College conducts workshops and seminars in a variety of topics throughout the year. These are intended to update job skills and explore new fields of interest. Some of the seminars have been for senior citizens, for law-enforcement personnel, for women seeking jobs and educational information, for volunteer firemen, for community agencies, and for business and industry.

Weekend Courses

These may be offered Friday and Saturday, perhaps even on Sunday, depending on the interest shown — sometimes alternate weekends, and they have the advantage of giving one a whole week to do the homework. They are usually credit courses.

TV Credit Courses

One's TV set at home is the classroom, as the class work is shown on home TV channels. The College assigns an instructor to answer students' questions and give and grade examinations. Home work and tests can be mailed to the instructor. The TV class work is once a week.

Courses by Newspaper

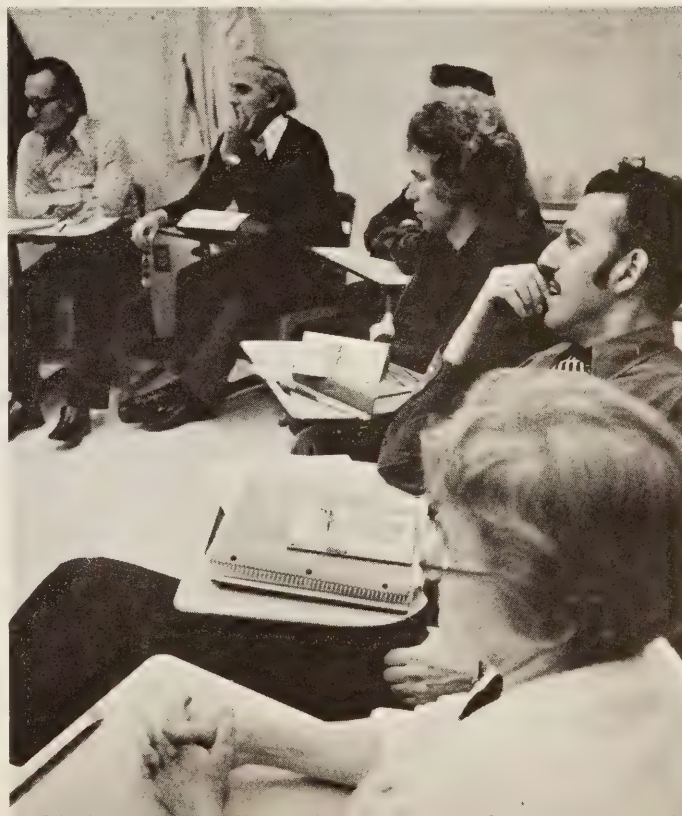
A number of courses is given each semester, with the class work being published in one of the local weekly newspapers. Contact with the college instructor can be made in person or by telephone, and home work and examinations are mailed in. These are credit courses.

Study Abroad

The College belongs to a consortium for international study, which offers credit courses in many countries, including England, Israel, Denmark and Canada. These courses can be for two weeks, for a whole semester or for an entire year. See Page 17 for details.

Summer Session

Courses conducted during the summer present an opportunity for residents of Broome County to accelerate, make up or just take courses. One does not have to be a full-time BCC student to enroll, and both credit and non-credit courses are offered in the day and evening. The credit courses have been accepted for college credit at many colleges and universities across the country. Non-credit mini courses are given too. Special flyers are available free in the Office of Continuing Education.



Counseling Center

The Counseling and Student Development Center provides many services for students, whether they are enrolled full-time or part-time. Personal counseling and academic advising are just some of the ways that students can find assistance here, as they encounter new experiences during their college years. The Center is equipped to help students:

1. Understand their basic needs in terms of social, vocational and emotional adjustment to the college setting.
2. Establish realistic educational goals and appropriate methods of achieving them.
3. Assess their strengths and weaknesses to enable them to more effectively deal with academic and personal problems.
4. Better understand their role and that of the College in the higher educational process.
5. Obtain information about transfer and career opportunities, as well as assistance in dealing with academic problems.
6. Grow in their personal development and determine appropriate values through instruction in human development courses.

The Counseling and Student Development Center, located on the second floor of the Wales Building, is staffed by six professional counselors and open to all BCC students, full-time and part-time. The Center is open from 8 a.m. to 4:30 p.m., Monday through Friday, and evening hours will be established during the academic year. You should become acquainted with the Center. Stop in at your convenience or call for an appointment (772-5185). A special brochure is available at the Center, giving details about the services available.

SPECIAL SERVICES PROGRAM

The Special Services Program at Broome Community College is a Federally funded program working jointly with State University of New York (SUNY) at Binghamton.

The program provides counseling services, tutorial help and information concerning other student needs. Tutoring sessions are held during the day at Broome Community College and also evenings and weekends at designated off-campus spots. The Special Services counselor is located in the Broome Community College Counseling Center in the Wales Administration Building and can be contacted at 772-5185.

ORIENTATION PROGRAM

Freshman, transfer or re-admitted students will have an opportunity to participate in various advising, counseling and orientation sessions as well as social and cultural activities prior to and during the semester of acceptance into the College. Information concerning these activities will be mailed to all students prior to the beginning of the semester.

The staff of the Student Affairs Office endorses the concept that a community college environment should facilitate the development of the whole student.

FOREIGN STUDENTS

The College provides an advisor to assist foreign students in their orientation to student life at Broome Community College. Both academic and non-academic problems may be discussed with the advisor, whose office is in the Wales Building, Room 210.

For admissions information, foreign students should contact the Admissions Office at Broome Community College, PO Box 1017, Binghamton, N.Y. 13902. To be admitted, students from other countries must submit a demonstrated proficiency of the English language, an affidavit of support, a transcript in English (or a certified translation) of all secondary school or college level work, and evidence of health insurance coverage. The National Association of Foreign Student Affairs offers a health plan to meet the needs of these students, and information is available directly from insurance companies or at the BCC Health Service. Students must furnish the College with the name of their insurance company and the policy number.

TRANSFER TO 4-YEAR COLLEGES AND UNIVERSITIES

Broome Community College has developed a fine reputation for its successful preparation of students for study at senior institutions. Students desiring to continue their education are encouraged to consult with a counselor in the Counseling and Student Development Center, their faculty advisor, or department chairperson for assistance in selecting a program and/or institution that is appropriate to their goals, abilities and aspirations.

To these ends, the College conducts the Transfer Emphasis Program, which consists of visits to the campus by representatives of four-year schools to recruit and advise potential transfer students. Taking place for two weeks, usually in November and March, these visits are designed to expedite the information process necessary to insure a smooth transition between community college and various four-year programs. The representatives, generally from admissions offices, discuss life on their campuses, financial assistance possibilities and activities available, in addition to the traditional explanations of all their academic programs.

Applications for the **State University of New York** colleges and university centers are available in the Counseling and Student Development Center. Students should apply directly to all **other colleges** (non-SUNY units) by requesting an application and any other pertinent data from the admissions office of the desired college.

All students should arrange at the BCC Registrar's Office to have copies of their transcripts forwarded to the admissions offices of the colleges to which they are applying. This will insure proper transfer of applicable credits. Any requests for references and recommendations may be forwarded to the Counseling and Student Development Center. All acceptances and rejections of applications should be reported to the Counseling and Student Development Center.

Any questions or problems regarding transfer should also be directed to the Counseling and Student Development Center.

PLACEMENT OFFICE

Most students who attend Broome Community College will eventually enter the labor market. Getting a job, particularly that first entry level position, requires an understanding of how to contact employers and what job hunting techniques provide the best employment success. The Placement Office not only helps you to locate positions but offers assistance in resume writing and interviewing techniques.

The Placement Office lists full-time, part-time and seasonal jobs from employers who want to hire Broome Community College students and alumni. Most of these positions are related to academic programs at the College, and they are of particular value to students wishing to gain experience in their chosen field. The New York State Employment Service "Job Bank" is also available on a daily basis in the Placement Office (Wales Building, Room 210).

The quality of the College's academic programs is well known by many companies both locally and nationally. During the spring semester of every year, representatives of business and industry visit the campus to interview potential graduates for employment purposes. Students wishing information regarding this recruiting program should contact the Placement Office.

Individual appointments can be made to discuss job market predictions, salary expectations, and other questions related to employment. Generally, those seeking employment can be divided into three groups — those who make things happen, those who watch things happen, and those who wonder what happened. The Placement Office can help you "make things happen."

THE ACADEMIC AREAS

Here is a summary of the figures for each of Broome Community College's four academic areas. Percentages are based upon the number of graduates heard from and not the total number. Salary information is for entry level positions; those who had jobs before enrolling at BCC and kept them are not figured in.

BUSINESS — 286 graduates, 48% employed, 15% unemployed, 32% transferred, 5% unavailable for work. Salary info — \$7,167 average, \$11,000 to \$4,680 range.

HEALTH SCIENCES — 181 graduates, 71% employed, 10% unemployed, 14% transferred, 5% unavailable for work. Salary info — \$8,166 average, \$14,304 to \$4,680 range.

LIBERAL ARTS — 268 graduates, 22% employed, 6% unemployed, 70% transferred, 2% unavailable for work. Salary info — \$6,434 average, \$8,216 to \$4,680 range.

ENGINEERING AND ENGINEERING TECHNOLOGY — 165 graduates, 62% employed, 4% unemployed, 33% transferred, 1% unavailable for work. Salary info — \$9,770 average, \$15,600 to \$6,240 range.

CURRICULUMS

Following is a summary of each curriculum in BCC's four academic areas. Percentages based on number of graduates heard from, not total number

LIBERAL ARTS

CHILD CARE — 15 graduates, 64% employed, 14% unemployed, 14% transferred, 7% unavailable for work. Salary info — \$5,840 average, \$7,000 to \$4,680 range.

CRIMINAL JUSTICE — 33 graduates, 50% employed, 5% unemployed, 45% transferred. No salary info available.

ASSOCIATE IN ARTS DEGREE — 194 graduates, 15% employed, 6% unemployed, 77% transferred, 2% unavailable for work. Salary info — \$6,632 average, \$8,216 to \$4,784 range.

ASSOCIATE IN SCIENCE DEGREE — 23 graduates, 5% employed, 5% unemployed, 90% transferred. No salary info available.

88% OF 1977 GRADUATES FOUND JOBS OR TRANSFERRED

- **TOTAL OF 894 GRADUATES**, with 81% responding to the survey. All statistics here are based on that 81% response
- **88% OF THE 1977 GRADUATES** either found employment or transferred to 4-year colleges, thus enabling BCC to fulfill its two major missions.
 - 49% of the graduates contacted went to work.
 - 39% transferred to 4-year colleges.
 - 9% were unemployed at the time of the survey
 - 3% were unavailable for work.
- **STARTING SALARIES** of those who went to work averaged \$8,254 per year and ranged from \$15,600 down to \$4,680.
- **GEOGRAPHICAL BREAKDOWN** —
 - 76% of those who went to work found jobs in Broome County, with an additional 8 1/2% working elsewhere in the Southern Tier. In addition, 5 1/2% got jobs elsewhere in New York State, and another 10% went outside the State
- **LEADING EMPLOYERS** in order:
 - Hospitals, nursing homes in Broome County
 - IBM Corp.
 - Retail stores in Broome County
 - Physicians, clinics in Broome County
 - Day care centers, educational services in Broome County
 - Out of state hospitals
 - Dentists in Broome County
 - Municipal Civil Service in Triple Cities area
 - Southern Tier hospitals
 - Restaurants, fast-food franchises in Broome County
 - New York State Civil Service
- **COLLEGES TO WHICH BCC GRADUATES TRANSFERRED IN 1977:**
 - 63% to State University of New York (SUNY) four-year colleges
 - 22% to private colleges in New York State
 - 15% to out-of-state colleges and universities

Most popular colleges, in order:

SUNY Binghamton
Oswego (SUNY)
Clarkson College of Technology
Cortland (SUNY)
Utica/Rome (SUNY)
Brockport (SUNY)

Rensselaer Polytechnic Institute (RPI)
Rochester Institute of Technology (RIT)
SUNY Buffalo
Oneonta (SUNY)
Geneseo (SUNY)
SUNY Albany

BUSINESS

ACCOUNTING — 61 graduates, 50% employed, 17% unemployed, 29% transferred, 4% unavailable for work. Salary info — \$6,291 average, \$8,372 to \$5,406 range.

BUSINESS ADMINISTRATION — 63 graduates, 19% employed, 14.5% unemployed, 62.5% transferred, 4% unavailable for work. Salary info — \$8,256 average, \$11,000 to \$6,240 range.

GENERAL BUSINESS — 30 graduates, 75% employed, 0 unemployed, 25% transferred. No salary info, as these graduates were working before enrolling at BCC.

MARKETING MANAGEMENT — 41 graduates, 63% employed, 6% unemployed, 31% transferred. Salary info — \$7,481 average, \$9,880 to \$5,200 range.

MARKETING SALES — 39 graduates, 31% employed, 23% unemployed, 35% transferred, 11% unavailable for work. Salary info — \$7,082 average, \$8,840 to \$4,992 range.

SECRETARIAL — 52 graduates, 69% employed, 21% unemployed, 4% transferred, 6% unavailable for work. Salary info — \$7,291 average, \$9,664 to \$4,680 range.

HEALTH SCIENCES

DENTAL HYGIENE — 34 graduates, 77% employed, 11% unemployed, 4% transferred, 8% unavailable for work. Salary info — \$9,980 average, \$14,304 to \$5,720 range.

MEDICAL LABORATORY — 16 graduates, 60% employed, 27% unemployed, 13% transferred. Salary info — \$9,590 average, \$11,180 to \$8,000 range.

MEDICAL OFFICE — 23 graduates, 91% employed, 0 unemployed, 4.5% transferred, 4.5% unavailable for work. Salary info — \$6,067 average, \$7,800 to \$5,120 range.

MEDICAL RECORD — 15 graduates, 79% employed, 14% unemployed, 7% unavailable for work. Salary info — \$6,782 average, \$8,746 to \$4,680 range.

NURSING — 74 graduates, 61% employed, 11% unemployed, 21% transferred, 7% unavailable for work. Salary info — \$9,175 average, \$10,816 to \$6,552 range.

X-RAY TECHNOLOGY — 19 graduates, 72% employed, 0 unemployed, 28% transferred. Salary info — \$9,554 average, \$9,776 to \$9,448 range.

ENGINEERING AND ENGINEERING TECHNOLOGY

CHEMICAL TECHNOLOGY — 24 graduates, 75% employed, 12.5% unemployed, 12.5% transferred. Salary info — \$11,542 average, \$14,500 to \$8,400 range.

CIVIL TECHNOLOGY — 32 graduates, 74% employed, 7% unemployed, 19% transferred. Salary info — \$7,995 average, \$15,600 to \$7,592 range.

ELECTRICAL TECHNOLOGY — 35 graduates, 77% employed, 0 unemployed, 23% transferred. Salary info — \$10,133 average, \$13,208 to \$6,240 range.

ENGINEERING SCIENCE — 35 graduates, 12% employed, 0 unemployed, 88% transferred. No salary info available.

FIRE PROTECTION — 3 graduates, 100% employed. No entry level salaries.

INDUSTRIAL TECHNOLOGY — 16 graduates, 82% employed, 0 unemployed, 9% transferred, 9% unavailable for work. No entry level salaries.

MECHANICAL TECHNOLOGY — 23 graduates, 78% employed, 4% unemployed, 13% transferred, 4% unavailable for work. Salary info — \$10,110 average, \$11,400 to \$7,530 range.

Student affairs, at Broome Community College fall within three primary areas of responsibility — student development, student services, and student management.

Student Development responsibilities include counseling, foreign student affairs, academic advisement, testing, freshman orientation, student activities, intercollegiate athletics, drug abuse education, leadership training, career development, veterans advisement, personal development courses, transfer advisement.

Student Services cover admissions, financial aids, placement, health services.

Student Management concerns itself with student discipline, rights, responsibilities, judicial system and grievance procedures.

Health Service

The College provides a Health Service which is available to all students. Professional staff includes a part-time physician available three mornings a week for two hours and one full-time registered nurse during regularly scheduled class periods.

The Health Service provides care of injuries and minor illness, health counseling and referral service to community resources. It is a resource area for relevant student problems, and it furnishes a non-threatening environment for personal problems. All records are confidential and health data is released only with the written authorization of the student. Common procedures performed by the Health Service include blood, urine tests, throat cultures, screening for V.D., pregnancy testing, breast exams, birth control counseling.

The Health Service is located on the first floor of the Wales Building. Cots are available for students to obtain a few quiet moments in a busy schedule.

An Emergency Squad composed of students assists the Health Service to bring quick, efficient assistance in time of an emergency. Students are encouraged to become active in this important function on campus.

Living Accommodations

The College has no dormitory facility and assumes no responsibility for student housing. As a service to students, the director of the Student Activities' Office maintains an up-to-date record of housing accommodations which landlords submit as being available. This listing is neither an approval nor rating by the College, nor will the College become a third party in any arbitration between students and landlords. Housing arrangements must be made directly by students and parents with local landlords.

Room and Board

The cost of room and board for out-of-town students is dependent upon the demands of the students. The average cost varies from \$40 to \$50 per week.

Veterans' Affairs

The College has maintained a Veterans' Affairs Office to provide assistance to veterans in applying for VA educational benefits and in resolving late payment problems. For information about financial aid to veterans, see the Financial Aid Office (Wales Building, Room 101).

STUDENT ACTIVITIES

The College recognizes the fact that student experiences outside the classroom are important in one's over-all development. For this reason the College supports an active co-curricular program as a complement to classroom studies. The variety of activities on the campus reflects the diversification of student interest and provides the opportunity for students to develop talents, leadership ability and a sense of social responsibility.

Students should check carefully for crediting arrangements for co-curricular activities. Liberal Arts, for example, permits a maximum of six such credits to be used in meeting Associate in Arts and Associate in Science degree requirements.

United Student Government

The United Student Government is the official representative organization of the student body. As such, it is consulted by the trustees, administration, faculty and staff when student input is desired.

In order to obtain the broadest possible cross-section of the campus, membership is derived from the following areas:

- A. The Freshmen and Senior class.
- B. The four educational areas—Technologies, Health Sciences, Liberal Arts, Business.
- C. The special interest groups—athletics, media, clubs, social activities.

Membership in the United Student Government is by campus-wide election or by appointment, as appropriate.

Some functions of the Student Government are:

1. Coordination, distribution, and supervision of funds for student activities.
2. Recommendation of policy to the College Administration via the College Senate.
3. Management of Book Store and vending operations through the Faculty-Student Association.

The United Student Government is a member of the Community College Student Association and coordinates the activities of this college with other colleges and universities statewide.

Program Board

The Program Board is one of the most active and hard working organizations on campus. The Board is responsible for sponsoring all social events as well as college hour and convocation programs. These events, including mixers, movies, coffee houses, concerts, spring picnic, semi-formals and programs featuring renowned artists and speakers, are funded with the student activity fee. The Program Board also affords students an opportunity to purchase tickets at reduced prices to a variety of programs at the Broome County Veterans Memorial Arena and the Forum and other off-campus locations.

Student Center

The busiest and most versatile building on the Broome Community College campus is the Student Center. It houses the gymnasium, the College Cafeteria, Book Store, and the Little Theatre, and many of the social events are held here. This building is used by day and evening students of all curriculums.

The Union

The small pre-fab building on campus is known as The Union. It houses varied facilities for students to enjoy during their leisure hours. A Union Board governs the rules and regulations under which billiard and ping-pong tables, "fooseball", air hockey and pin ball machines are made available to the students. For those who wish to relax, there is a lounge with fireplace, player piano, television and vending machines.

Also located in The Union are the offices of the yearbook, campus newspaper, Program Board, United Student Government, the student trustee, Clubs Council, Judicial Review Board and Student Activities.

Student Publications

The Fulcrum is the campus newspaper and The Citadel the College yearbook. Positions on both publications are open to all students.

The Fulcrum covers college issues both editorially and graphically. Published twice monthly, it is the principal voice of the student community. It is managed and edited by the students themselves.

The Citadel staff is involved in the development and editing of the College yearbook which reflects the unique features of the current school year, and offers a pictorial presentation of the students, faculty and staff.

Music

College Choir is sponsored jointly by the Liberal Arts Department and United Student Government. Choristers have gained an excellent reputation and are exposed to a broad range of choral literature reflecting the varied demands for community concerts. The chorus traditionally produces its own Christmas program for local television and presents an annual Spring Concert, as well as performing for local church and civic organizations. The College Choir, moreover, has accepted an invitation to sing at the Washington Cathedral in the nation's capital in April 1979 as part of its annual concert tour program. Rehearsals are held twice weekly and all students as well as faculty and staff are welcome to sing in the ensemble.

The Instrumental Music Association offers students who have previously played instruments the chance to continue their involvement in small ensembles (brass, woodwind, string and recorder) and the College Stage Band. A limited program of private coaching is also available.



Curtain call for the BCC Theatre Department's highly successful production of Oliver Goldsmith's classic comedy "She Stoops to Conquer."

Professional Society Affiliates

Since exposure to organizations in their fields of study is considered of benefit to students, many curriculums have their own affiliates of national professional societies. Among these are:

Society of Manufacturing Engineers (SME) for Mechanical Technology students.

Dental Hygiene Association, an affiliate of the American Dental Hygiene Association.

Broome CC Chapter **Future Secretaries Association**, affiliated with the National Secretaries Association (International) Binghamton Chapter.

Institute of Electrical and Electronics Engineers (IEEE) for Electrical Technology students.

In addition, some meetings of local professional societies are attended by students, as the **American Chemical Society** invites Chemical Technology students to its meetings. Some professional societies hold meetings on campus, too, and students are always welcome to attend. Thus students have the opportunity to become acquainted with professional people in their fields of study and to attend lectures and see films and demonstrations of new developments.

The Broome Community College Theatre Company

Complementing the studio and academic course work in theatre is the Broome Community College Theatre Company. All students are invited to participate, whether or not enrolled in formal course work.

The Theatre Company enjoys a fine artistic reputation, presenting a broad range of theatrical styles, and provides its actor/technicians with varied opportunities for ensemble as well as individual training. Whether performing in the intimate setting of the college's Little Theatre, or on the road in Europe in an international festival, the BCC Theatre Company provides a challenging and exciting experience for students with an interest in the theatre.

NOTE: Students may receive transferable credit for active participation in College Choir, the Instrumental Music Association and the College Theatre Company. The conditions for this credit are available from one's advisor.

Curriculum Organizations

In addition to the student organizations listed above that are affiliated with professional societies, the College has a number of associations that are identified with specific curriculums. Among these are the Business Club, the Civil Technology Association, the Medical Laboratory Technology Society, the Student Nurses Association, the Lively Arts from the Liberal Arts curriculum, and the Student Organization of Radiologic Technologists.

Honor Societies

Phi Theta Kappa

In 1962, the Mu Eta Chapter of Phi Theta Kappa was established at the College. Phi Theta Kappa is a national honor society at junior colleges, similar in purpose to Phi Beta Kappa at the four-year colleges and universities. Mu Eta Chapter is open to freshmen and seniors at Broome CC who have achieved outstanding academic grades, been especially active in co-curricular participation, demonstrated outstanding qualities of leadership and responsibility, and made noteworthy contributions to the College.

Sigma Phi Alpha

The national dental hygiene honor society, Sigma Phi Alpha, has a chapter at Broome CC, the Upsilon Chapter. Senior Dental Hygiene students who rank highest in scholarship and who exhibit potential qualities for future growth and attainment are selected for membership.

Tau Alpha Pi

The national honor society for students in engineering technology programs, Tau Alpha Pi has established a chapter on the Broome Community College campus. It is the Beta Theta Chapter. This society recognizes outstanding academic achievement in BCC engineering technology curriculums in Electrical, Civil, Chemical and Mechanical Technology.

Other Clubs

In addition to the co-curricular activities already listed, other organizations are active on campus. These include:

Archery Club	Hockey Club
Art Club	Inmate Education
Aviation Club	Lacrosse Club
Bio Club	Outing Club
Camera Club	Over 21 Club
Campus Bible Fellowship	Parachute Club
Circle K	Scuba Club
Emergency Squad	Ski Club
Environmental Action Club	Third World

These are open to all full-time students and to part-timers who pay the student activity fee. Details are available in the Student Handbook and from the Director of Student Activities.



Men's Sports

Broome Community College fields men's teams in seven varsity sports and competes on a club basis in ice hockey, lacrosse, snow skiing and horse show competition.

BCC athletic teams have earned an excellent reputation in two-year college competition. Included in the basketball team's more than 690 victories are 10 regional titles.

The tennis team has also been a frequent regional winner, and the baseball team has continued to be a regional power since capturing its third Region III title in 1974. The golf team had a stretch of 39 wins in 40 dual matches, and the cross country and wrestling teams have shown marked improvement and have sent competitors to recent national tournaments. And the fortunes of the soccer team appear to be on the rise too.

Intramurals

Physical activity is a vital part of an individual's life, regardless of physical capability. With this in mind, the Physical Education Department coordinates an intramural program for all students enrolled at the College. Students are invited to participate in team sports such as soccer, gym hockey, basketball, volleyball and softball. For those interested in individual competition or "play for fun", sports such as tennis, golf, badminton, horse-shoes and bowling are also offered.

Women's Sports

Broome Community College fields women's teams in four varsity sports--tennis, volleyball, basketball and softball--and they have achieved some fine sports success in recent years. The tennis team has captured two regional titles and participated in national tournaments, and the volleyball team was invited to the first-ever National Junior College Volleyball Tournament.

Kinder Kare Child Care Center

Broome Community College provides child care facilities for students who are parents of young children. Called Kinder Kare, the center is located in the United Methodist Church of Nimmonsburg, which is just north of the campus. It is open for the convenience of day and evening students, whether they are enrolled full-time or part-time. The rates are reasonable, the center can be used for only three hours during any 24-hour period, and reservations must be made in advance. Kinder Kare operates according to sound educational principles and has programs for youngsters up to six years of age to help them grow and learn while they are there.

About Broome Community College

Broome Community College is a comprehensive community college. It has programs designed to prepare graduates both for immediate employment and for transfer to four-year colleges and universities at the junior, or third-year level.

In addition to its daytime enrollment, which numbered 2,700 last year, the college has a continuing education program which had about 2,000 part-time evening students in the fall of 1977 and about 1,000 taking courses during the Summer Session.

The College is co-educational, publicly-supported, and has historically attracted about two-thirds of its student body from Broome County and one-third from outside the county. The ratio has recently been closer to 80% and 20%.

The day student body can be classified into four parts, based on study objectives—university-parallel or transfer programs, the business program, engineering and engineering technology curriculums, and health science courses.

The College is sponsored by Broome County, supervised by the State University of New York, and accredited by both professional and educational organizations (See inside front cover).

The Campus

The College campus is located three miles north of Binghamton on Upper Front Street, which is Route 11 and Route 12 at this point running alongside of Interstate 81. Nine of the 12 buildings form two contiguous quadrangles to make a compact campus layout.

Most of the buildings are two stories high, of modern functional design, and made of brick with colored panel-wall facing. They lie in a suburban setting in the virtual center of the College's 120 acres of land.

In addition to classrooms and laboratories, the campus has its own cafeteria, gymnasium and athletic fields, and a Little Theatre. These facilities add up to make the campus a multi-million dollar investment in the youth of Broome and surrounding counties.

The Community

The community is an industrial and agricultural area in New York State's Southern Tier. It is in the approximate center of the state, measuring from east to west, and its southern extremity touches the Pennsylvania state line.

Binghamton is the principal city in Broome County, but it is only a part of the community known as the Triple Cities. Endicott and Johnson City, along with Vestal and other suburbs, help to make the community much larger in population and geography than the city of Binghamton.

Binghamton has a population of 64,123, yet the Triple Cities area embraces 155,522 people. The population of Broome County is 221,815. Diversified industry in the Community includes such firms as IBM, General Electric, Singer Co. (formerly Link), GAF, New York State Electric & Gas Corp, and Endicott Johnson.

The College has become an integral part of the community since it was started in 1946. Many of the campus facilities are offered at nominal cost for use by responsible organizations, and most of the College's curriculums are designed to help fill the economic needs of the county.

History

The College graduated its first class in 1949. These students had entered what was then known as the New York State Institute of Applied Arts and Sciences at Binghamton in the fall of 1947. The original institute was one of five founded in the state in 1946, following the pattern of six agricultural and technical institutes which New York had established earlier in the century. The first programs offered were all occupational in nature and included Chemical, Electrical and Mechanical Technology, as well as Medical Office and Technical Office Assistant courses.

In 1953 New York relinquished operating control of the school to a new sponsor, the County of Broome, under provisions of the newly-enacted State Community College Law, and the name was changed to Broome County Technical Institute. In 1956 the name was again changed, to Broome Technical Community College, to reflect the increasingly comprehensive nature of the educational offerings. In 1971 the name became Broome Community College as the scope of the curriculums continued to expand.

The Civil Technology program was added to the five original curriculums in 1957. Dental Hygiene was introduced in 1956, and the Business programs were expanded to include offerings in Accounting, Marketing, Engineering Secretarial in the 1950's. Executive Secretarial was added in the early 1960's.

A big change in the College's programs came about in the 1950's as a result of a new emphasis on university-parallel or transfer programs to go along with the college's occupational offerings. Engineering Science, the first two years of an engineering program, was introduced in 1958. Liberal Arts and Sciences in 1962 and Business Administration in 1963.

In the late 60's interest began to develop in the health science field. As a result, the College introduced a degree-granting program in X-Ray Technology in 1965, added Medical Laboratory Technology in 1966, Nursing a year later, and Medical Record Technology in 1969. The College was responding to the changing needs of the area and adjusting its offerings to fulfill the mission of catering to the post-high school educational needs of the community.

Criminal Justice and Child Care have been added since, and degree programs in Individual Studies and in Industrial Safety and Occupational Hygiene are being introduced this year, along with Office Services Assistant.

For its first five years, the school was housed in a refurbished State Guard Armory in downtown Binghamton. This building was gutted by fire in September 1951, and for the next five years Kalurah Temple and two other buildings in the city provided temporary quarters. In 1957 the College moved to its present campus on the north side of Binghamton. The first addition to the original campus came with the construction of Titchener Hall, which was dedicated in 1963. The Library Building was completed five years later, and the Business Building opened in 1972.



BOOK STORE

The College Book Store, or Campus Store as it is sometimes referred to, is located in the Student Center and actually has two areas of operation — the Textbook Department and The Campus Shop.

In the Textbook Department students may purchase their required books. To avoid standing in long lines the first week of classes, students are urged to purchase their books during the advance sale period, which immediately precedes the start of classes. It is advisable to purchase all required textbooks early in the semester. In addition to the obvious reason of using them for studying, all unsold books must be returned to the publisher shortly after the semester begins.

The Campus Shop offers a variety of items. In addition to such classroom supplies as notebooks, paper, pens and binders, there are art and drafting materials, imprinted gift items and sportswear, and an extensive selection of paperbacks.

The store manager welcomes students to speak to him about any special problems, suggestions or requests.

ALUMNI

The Broome Community College Alumni Association provides a link between the College and its Alumni, and its activities include the awarding of a number of scholarships each year and the active and monetary support of various college programs.

Any graduate may become a member by paying the modest lifetime dues of \$20. There are no annual dues. Membership entitles alumni to discounts for some on-campus functions; group term/life insurance at special rates; voting eligibility for the Board of Directors including rights to stand for election to a seat on the Board. Alumni also receive the College's quarterly newsletter, BCC TODAY, and the Alumni Association conducts an annual Dinner-Dance. Alumni are encouraged to join and participate.

Faculty-Student Association

The Faculty-Student Association of Broome Community College, Inc., is an educational corporation designed to provide to the College, and particularly to the students and faculty, services that are not included in the regular College budget.

It provides the corporate organization through which the student fees are expended under a budget prepared by the United Student Government. It also operates the College Book Store.

Through the modest earnings of the Book Store the income from student fees is augmented to support new or special activities.

The association is governed by a board of directors elected by members who hold certain offices on campus.

The operating philosophy is to make the educational program outside of the classroom a well-rounded supplement to the academic experience of the student.

Campus Carillon

The College has a Maas-Rowe symphonic carillon, which tolls the hours with the Westminster chimes and occasionally plays musical selections through its automatic music roll attachment. The carillon was a gift to the College, donated by former trustee Dr. Leopold Eckler and the College Foundation.

Programs of Study By Curriculum



ACCOUNTING

Accounting students receive their training in such areas as intermediate accounting, cost accounting and data processing. Graduates successfully take positions in banks, industrial firms, public accounting and retail business.

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

BUS 101	Accounting II	4	0	4
CST 110	Introduction to Data Processing	3	0	3
ENG 120	Written Expression II	3	0	3
MAT 117	*Elementary Finite Mathematics with Algebra	4	0	4
	or Liberal Arts Elective	(3)	(0)	(3)
SPK 100	Effective Speaking	2	0	2
		15-16	0	15-16

SECOND YEAR Fall Semester

BUS 200	Intermediate Accounting I	4	0	4
BUS 205	Cost Accounting I	4	0	4
PHS 111	Physical Science for Today	2	2	3
	Social Science Elective	3	0	3
	Elect 1 of the following			
BUS 249	Personnel Management	(3)	(0)	(3)
BUS 297	Co-operative Work Experience			(1-3)
CST	A programming language course ..	(2)	(2)	(3)
		15-16	2-4	15-17

Spring Semester

BUS 201	Intermediate Accounting II	4	0	4
BUS 206	Cost Accounting II	4	0	4
	Elect 2 out of 3			
BUS 220	Financial Information Systems	(2)	(2)	(3)
BUS 295	Accounting Seminar	(2)	(2)	(3)
CST	A programming language course ..	(2)	(2)	(3)
	Social Science Elective	3	0	3
		15	4	17

*If a student has passed Mathematics 11 or intermediate algebra in high school, he/she takes a Liberal Arts elective.

ACCOUNTING — BANKING EMPHASIS

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

ECO 111	Introduction to Macro-Economics ...	3	0	3
BUS 101	Accounting II	4	0	4
BUS 120	Business Law II	3	0	3
ENG 120	Written Expression II	3	0	3
PSY 110	Psychology	3	0	3
		16	0	16

SECOND YEAR Fall Semester

BUS 245	Management: A Behavioral Approach	3	0	3
CST 110	Introduction to Data Processing	3	0	3
SPK 102	Effective Speaking	3	0	3
PHS 111	Physical Science for Today	2	2	3
**ECO 253	Money and Banking	3	0	3
		14	2	15

Spring Semester

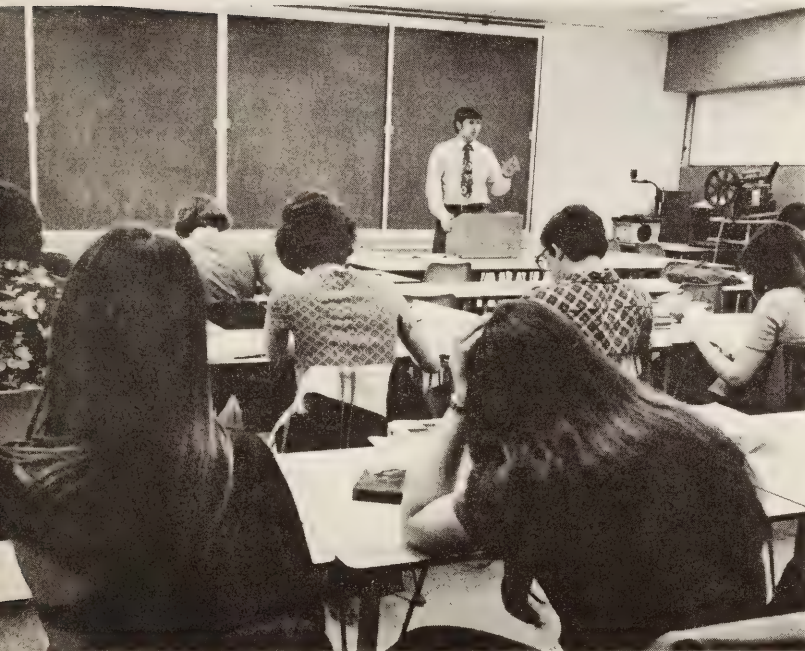
BUS 249	Personnel Management	3	0	3
BUS 224	Business Finance	3	0	3
BUS 152	Selling Fundamentals	3	0	3
	Social Science Elective	3	0	3
	*Business Elective	3-4	0	3-4
		15-16	0	15-16

* Suggested Business Electives include such American Institute of Banking (AIB) courses as Analyzing Financial Statements, Installment Credit, Principles of Bank Operations, Supervision and Personnel Administration, as well as BUS 297 Co-operative Work Experience.

** If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.

BUSINESS ADMINISTRATION

This program is designed specifically to prepare graduates to continue their business studies at a four-year college or university. While offering maximum transfer potential toward a Bachelor's degree in accounting or management, it still gives students preparation for employment if they decide to work instead of continuing their higher education.



A faculty member lecturing to an accounting class.

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
PED	*Physical Education (Select courses)	2	0	1
		17	0	16

Spring Semester

BUS 101	Accounting II	4	0	4
BUS 115	**Business Statistics	3	0	3
or				
MAT 139	**Algebra	(4)	(0)	(4)
BUS 120	Business Law II	3	0	3
CST 110	Introduction to Data Processing	3	0	3
ENG 120	Written Expression II	3	0	3
		16-17	0	16-17

SECOND YEAR Fall Semester

Elect 1 of the following 3 courses:				
BUS 200	Intermediate Accounting I	(4)	0	(4)
BUS 249	Personnel Management	(3)	0	(3)
CST 120	Computer Programming — FORTRAN	(2)	(2)	(3)
ECO 110	Introduction to Micro-Economics ..	3	0	3
MAT 121	Finite Mathematics	3	0	3
PHS	113 OR 115 OR 116 Physical Science — Astronomy OR Geology OR Environment	3	3	4
	Liberal Arts Elective	3	0	3
		14-16	3-5	16-17

Spring Semester

Elect 1 of the following 3 courses:				
BUS 201	Intermediate Accounting II	(4)	0	(4)
BUS 245	Management: A Behavioral Approach	(3)	0	(3)
BUS	Business Elective	(3)	0	(3)
ECO 111	Introduction to Macro-Economics ..	3	0	3
MAT 122	Introduction to Calculus	3	0	3
PHS	113 OR 115 OR 116 Physical Science — Astronomy OR Geology OR Environment	3	3	4
	Liberal Arts Elective	3	0	3
		15-16	3	16-17

* An additional semester of Physical Education recommended.

** If a student has passed Mathematics 11 or intermediate algebra in high school, he/she takes Business Statistics.

CHEMICAL TECHNOLOGY

The Chemical Technology curriculum is designed to meet the increasing demand for chemical technicians. Graduates of the Chemical Technology program have the education and training which qualifies them for immediate gainful employment and/or further study for advanced degrees. This background makes the Chemical Technology graduates highly sought after by employers and concurrently affords them the flexibility to advance academically.

Chemical technicians of both sexes have filled a vital manpower need in companies and organizations where background in various areas of chemistry is necessary or desirable. The constant development of new products, for example, creates a demand for chemical technicians.

Employers of chemical technicians

include IBM, GAF, Eastman Kodak, Allied Chemical, DuPont, Norwich Pharmacal, General Electric, American Cyanamid, Union Carbide, Bristol Laboratories, Warner-Lambert and many other industrial firms as well as government agencies, hospitals and educational institutions.

Initial positions are usually in a research, development, process, quality control or analytical laboratory or in a pilot plant. In these positions a chemical technician may work for a senior staff member or be a member of a group working in a particular area. Experienced chemical technicians have become supervisors, group leaders, technical salesmen and research and development technicians.

This curriculum is accredited by the Engineers Council for Professional Development.

An instructor showing students how to prepare samples of organic compounds for an infrared analysis on the spectrophotometer in the Organic Chemistry Laboratory.



FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
ENG 100	Basic Language Skills or	3	0	3
ENG 110	Written Expression I			
CHM 161	Chemistry	3	3	4
MAT 141	College Algebra and Trigonometry	4	0	4
PHY 141	Physics	3	2	4
		13	5	15

Spring Semester

ENG 150	Technical Writing	3	0	3
CHM 162	Chemistry	3	3	4
MAT 142	Applied Calculus I	4	0	4
PHY 142	Physics	3	2	4
CST 122	Scientific Computer Programming — FORTRAN	2	2	3
		15	7	18

SECOND YEAR Fall Semester

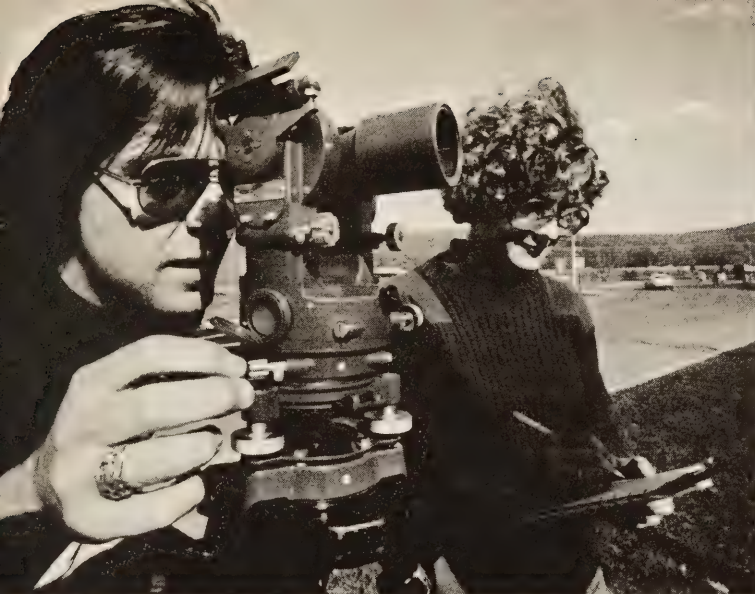
CHM 261	Organic Chemistry	3	6	5
CHM 265	Analytical Chemistry	3	6	5
CHM 271	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

Spring Semester

CHM 262	Organic Chemistry	3	6	5
CHM 266	Analytical Chemistry	3	6	5
CHM 272	Chemical Processes	3	4	5
	Social Science Elective	3	0	3
		12	16	18

GRADUATION REQUIREMENT: 69 CREDITS

**CHILD CARE PROGRAM
on page 40**



Students using a theodolite and recording the results in a Civil Technology surveying class.

CIVIL TECHNOLOGY

The construction industry, considering all related goods and services such as manufacturing and transportation, is the largest industry in the country. This curriculum is designed to provide the basic education for entry positions in the civil engineering and construction industries.

Graduates of this program begin their careers as engineering technicians and are qualified to work as assistants to professional and supervisory persons, such as engineers, architects, construction superintendents, surveyors and contractors. They may also find employment with agencies of the Federal, state and local governments.

Starting positions may be in drafting design, estimating, testing of materials, specification writing, inspection, surveying, sales and adjusting insurance claims. Excellent opportunities exist for

advancement and promotion. The starting salaries of graduates of this program has ranged between \$8,500 and \$11,000.

The Civil Technology Department offers two degrees: 1) the Associate in Applied Science in Civil Technology is offered during the day. This degree is accredited by the Engineers Council for Professional Development (ECPD). 2) the Associate in Applied Science in Industrial Technology, Civil Technology major, is offered in the evening. Starting salaries for graduates range from \$8,500 to \$12,000.

The energy crisis has brought a great increase in activity to make this country self-sufficient. Billions of dollars will be spent on nuclear and fossil fuel electric generating plants. Other billions of dollars will be used for clean air and water facilities.

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CIV	111	Surveying I	2	6	4
CIV	115	Engineering Drawing I	1	3	2
EGR	110	Introduction to Technologies	1	0	1/2
ENG	110	Written Expression I or	3	0	3
ENG	100	Basic Language Skills			
MAT	141	College Algebra and Trigonometry	4	0	4
PHY	141	Physics	3	2	4
			14	11	17 1/2

Spring Semester

CIV	112	Surveying II	1	3	2
CIV	117	Architectural Drafting I	1	3	2
CIV	124	Mechanics	3	0	3
MAT	142	Applied Calculus I	4	0	4
PHY	142	Physics	3	2	4
ENG	150	Technical Writing	3	0	3
			15	8	18

SECOND YEAR Fall Semester

CIV	215	Strength of Materials	4	0	4
CIV	217	Materials Testing	2	3	3
Technical Electives (Choose 2)					
CIV	238	Architectural Design and Building Materials	2	3	3
CIV	235	Hydraulics	3	3	4
CST	122	Scientific Computer Programming — FORTRAN	2	2	3
MAT		Mathematics Elective	3	0	3
		Social Science Elective	3	0	3
			13-15	5-9	16-17

Spring Semester

		Social Science Elective	3	0	3
Technical Electives (Choose at least 13 credits)					
CIV	212	Route Surveying and Photogrammetry	3	3	4
CIV	224	Reinforced Concrete Design	2	3	3
CIV	226	Structural Steel Design	2	3	3
CIV	236	Construction Management	3	0	3
CIV	231	Estimating and Construction Planning	2	3	3
CIV	240	Soil Mechanics	2	3	3
CIV	244	Environmental Sanitation	3	0	3
MAT		Mathematics Elective	3	0	3
			13-15	6-15	16-18

GRADUATION REQUIREMENT: 67 1/2 CREDITS

DENTAL HYGIENE

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO 131	Human Biology I		3	2	4
DEN 101	Dental Hygiene I		2	6	4
DEN 103	Oral Anatomy and Physiology		2	4	4
ENG 110	Written Expression I		3	0	3
			10	12	15

Spring Semester

BIO 132	Human Biology II		3	2	4
DEN 102	Dental Hygiene II		2	8	4
DEN 105	Nutrition		3	0	3
DEN 106	Clinical Dental Radiography		1	2	2
BIO 160	Microbiology		2	3	3
SPK 102	Effective Speaking		3	0	3
			14	15	19

SECOND YEAR Fall Semester

DEN 201	Dental Hygiene III		4	12	7
DEN 204	General and Oral Pathology		3	0	3
DEN 205	Periodontology		2	0	2
DEN 213	Public Health		3	0	3
PSY 110	General Psychology		3	0	3
			15	12	18

Spring Semester

DEN 202	Dental Hygiene IV		2	12	5
DEN 206	Dental Pharmacology		2	0	2
DEN 210	Dental Materials		2	2	3
DEN 214	Dental Specialties		2	0	2
SOC 110	Introduction to Sociology		3	0	3
			11	14	15

NOTE: The Dental Hygiene Department recommends that dental hygiene students wear safety glasses during pre-clinical and clinical procedures, especially the individual wearing contact lenses.

The Dental Hygiene curriculum is designed to prepare students for the contemporary practice of dental hygiene. The curriculum emphasizes the fundamental knowledge necessary for practice in a private dental office or similar clinical setting under the supervision of a dentist.

The dental hygienist performs various preventive services, such as dental prophylaxis, topical fluoride applications, dental radiographs and instruction in plaque control procedures. Successful completion of the curriculum permits one to take the required written and practical licensure examinations.

Dental Hygiene graduates averaged \$9,980 as starting salaries in 1977, encompassing a range from \$14,304 to \$5,720.

Students must purchase instruments

and uniforms which range from \$350-\$400 and pay license examination fees which range from \$120-\$150 in addition to textbooks.

The American Dental Hygiene Aptitude test is required for all dental hygiene applicants. The test should be taken the fall prior to desired admission. Upon admission into the program all dental hygiene freshmen will be cognitively mapped to determine learning styles.

Students who wish to pursue a career as a dental hygienist in an elementary or secondary school or as a dental hygiene educator at the college level are encouraged to transfer to a baccalaureate program after graduation.

The curriculum is accredited by the Council on Dental Education of the American Dental Association.



A student performs a prophylaxis on a patient in the Dr. James T. Ivory Dental Hygiene Clinic.

ELECTRICAL TECHNOLOGY

FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
CST 122	Scientific Computer Programming — FORTRAN		2	2	3
EET 111	Electrical Construction Laboratory I		1	3	2
EET 121	Electrical Circuits		4	3	5
EGR 110	Introduction to Technologies		1	0	1/2
ENG 110	Written Expression I or		3	0	3
ENG 100	Basic Language Skills				
MAT 141	College Algebra and Trigonometry		4	0	4
			15	8	17 1/2

Spring Semester

EET 112	Electrical Construction Laboratory II		0	3	1
EET 130	Engineering Drawing		0	3	1
EET 150	Electronics I		4	3	5
MAT 142	Applied Calculus I		4	0	4
EET 261	Network Analysis		3	0	3
ENG 150	Technical Writing		3	0	3
			14	9	17

SECOND YEAR Fall Semester

EET 241	Electrical Machines and Controls I ..		3	3	4
EET 251	Electronics II		3	3	4
PHY 141	Physics		3	2	4
EET 267	Digital Electronics and Microprocessors		3	2	4
	Social Science Elective		3	0	3
			15	10	19

Spring Semester

EET 230	Electronic Design and Fabrication ...		0	3	1
EET 242	Electrical Machines and Controls II ..		4	3	5
EET 252	Electronics III		3	3	4
PHY 142	Physics		3	2	4
	Social Science Elective		3	0	3
			13	11	17

GRADUATION REQUIREMENT: 70 1/2 CREDITS

The Electrical Technology program at Broome Community College is made up of a planned sequence of college level courses leading to the associate degree, and it is designed to prepare men and women to work in the field of engineering technology. Engineering technology is concerned primarily with the application of established scientific and engineering knowledge and methods.

The graduate of the electrical program is an electrical technician who is trained to be the interface between the graduate engineer and the skilled craftsman.

The technician translates problems into functioning equipment, using his knowledge in mathematics, electronics, circuit analysis and computer technology. He does this whether he is working in a small company as the only technician or in a large company as part of a team.

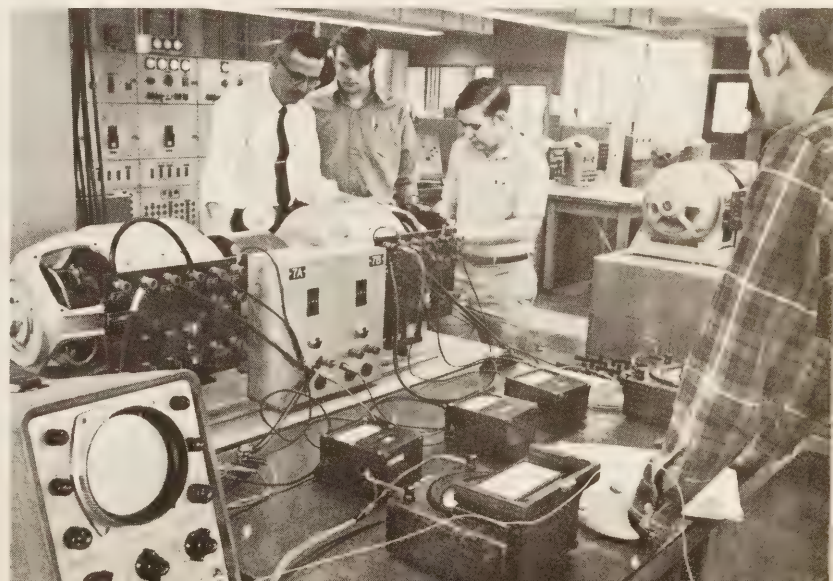
The technician works for companies like New York State Electric and Gas, International Business Machines, Xerox, Eastman Kodak, General Electric, General Aniline and Film, Universal Instruments, Raymond Corporation,

National Cash Register, Bell Labs and Corning Glass. Starting positions include technical sales representative, engineering assistant, computer technician, electronics technician or laboratory, field service or test technician. Starting salaries for graduates are ranging between \$6,240 and \$13,208.

Many technicians find that more education is desirable. While their basic education is not transfer-oriented, graduates of Broome Community College have successfully completed advanced study at State University of NY colleges, Rochester Institute of Technology, Clarkson College of Technology, Tri-State College, University of Arizona, University of Houston, University of Miami and others.

The program is fully accredited by the Engineers Council for Professional Development.

State University of NY at Binghamton offers a Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline, such as Electrical Technology.



Instructor explaining the operation of equipment to Electrical Technology students in the Electrical Machines and Controls Laboratory.

ENGINEERING SCIENCE

The level of work covered in the Engineering Science curriculum is primarily designed to prepare graduates to continue their studies in the engineering field in four-year colleges and universities. But there are also employment opportunities for qualified graduates.

The emphasis in this program is on mathematics and physics, so that graduates can transfer to four-year schools into the junior year in physics, engineering and mathematics.

Broome Community College is a member of the New York State Two-Year/Four-Year Engineering College Curriculum Study Committee. This organization's purpose is to facilitate the transfer to four-year colleges, with junior-year standing, of two-year college graduates from engineering science programs. Rensselaer Polytechnic Institute (RPI), Clarkson, Cornell, Syra-

cuse, Union and State University at Buffalo are among the members of the Two-Year/Four-Year Engineering College Curriculum Study Committee who have agreed to accept those two-year college graduates who have been recommended by their Engineering Science departments.

Some of the job opportunities for those who prefer to seek immediate employment lie in the engineering technician field as assistants to engineers in research and development and positions involving the application of mathematics.

Students entering Broome Community College who wish to continue studying for their bachelors' degrees in engineering, applied mathematics or physics will find this the most appropriate course of study. Course work in high school should be above the 80% level in all areas.

These are the senior year courses for the students in the Class of 1979:

SECOND YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
EGR 271	Mechanics	4	0	4
EGR 277	Engineering Science Laboratory I ...	1	3	2
MAT 271	Engineering Calculus with Analytic Geometry III	4	0	4
PHY 271	Physics (Electricity and Magnetism) ..	4	0	4
	Social Science Elective	3	0	3
		16	3	17

Spring Semester

*EGR 274	Electrical and Electronic Circuits	4	0	4
EGR 278	Engineering Science Laboratory II ..	1	3	2
MAT 272	Differential Equations with Linear Algebra	4	0	4
PHY 272	Physics (Modern)	4	0	4
	Social Science Elective	3	0	3
		16	3	17

* Or approved engineering option

GRADUATION REQUIREMENT: 67 CREDITS

The schedule of courses listed directly below applies to members of the Class of 1980. Students who are seniors in the 1978-79 college year will take the courses listed in the column at the left, as they constitute the second year of study they began last year.

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
CHM 145	Chemistry	3	3	4
MAT 171	Engineering Calculus with Analytic Geometry I	4	0	4
MET 115	Graphics	1	2	2
PHY 181	Engineering Physics I	3	2	4
	English or Literature Elective	3	0	3
		14	7	17

Spring Semester

CHM 146	Chemistry	3	3	4
CST 124	Computer Programming for Engineers	2	2	3
MAT 172	Engineering Calculus with Analytic Geometry II	4	0	4
PHY 182	Engineering Physics II	3	2	4
	English or Literature Elective	3	0	3
		15	7	18

SECOND YEAR Fall Semester

*EGR 281	Mechanics: Statics	3	0	3
EGR 285	Electrical and Electronic Circuits	3	0	3
EGR 287	Engineering Science Laboratory I ...	0	3	1
MAT 271	Engineering Calculus with Analytic Geometry III	4	0	4
PHY 281	Engineering Physics III	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		16	5	18

Spring Semester

*EGR 282	Mechanics: Dynamics	3	0	3
EGR 286	Engineering Analysis	1	0	1
EGR 288	Engineering Science Laboratory II ..	0	3	1
MAT 272	Differential Equations with Linear Algebra	4	0	4
PHY 282	Engineering Physics IV	3	0	3
PED	Physical Education Elective	0	2	1
	Social Science Elective	3	0	3
		14	5	16

* Or approved Engineering optional course

GRADUATION REQUIREMENT
FOR CLASS OF 1980 STUDENTS: 69 CREDITS

FIRE PROTECTION TECHNOLOGY

The fire fighter is confronted today with infinitely more complex problems and significantly greater hazards than ever before in history. As a result, the fire service personnel must obtain the knowledge and skills necessary to meet the challenges of the job.

The Fire Protection Technology Program is designed to provide fire fighters and related fire service personnel with specialized training. The curriculum has been developed by a local advisory committee to meet the needs of the area. Specialized courses as well as general education courses constitute the degree program. Specialized courses include Fire Fighter Tactics and Strategy, Arson Investigation, Hydraulics, Hazardous Materials, Fire Prevention, and Building Construction.

The Fire Protection Program is a part-time program open to both paid and volunteer fire fighters of the community, as well as those persons in related fire-matic areas.

Graduates will be awarded the Associate in Applied Science degree.

INDIVIDUAL STUDIES

A new offering this year, the Individual Studies curriculum is designed to give students more flexibility by permitting them to create their own program — under faculty advisement. Students can structure individualized degree programs that are not otherwise available at BCC by arranging any of the College's existing courses into a combination that concentrates on a particular field.

Their choices may combine courses from several departments of the College and thus result in a strong interdisciplinary education experience. The two necessary components of their courses are an area of concentration, which is a set of courses that deals directly with the field of study selected by the student, and a core of general studies to give an academic scope to the program.

Individual Studies is intended to be particularly helpful for older part-time students, especially those who have previous non-collegiate but job-related experiences, as these may earn college credit. Full-time students may also find this offering of value.

Students completing their Individual Studies curriculum will earn either an Associate in Applied Science or Associate in Science degree, depending on the field chosen. Those interested in seeking admission to the program should contact the BCC Counseling and Student Development Center (Wales Building, Room 200 or phone 772-5185).

INDUSTRIAL TECHNOLOGY

The Industrial Technology curriculum provides an educational opportunity for those students who desire two years of technical education with a non-calculus mathematics approach. (Exception: the Applied Mathematics major.) The Industrial Technology curriculum is a general engineering technology with specific majors and allows a student the choice of elective courses in several technical specialties. Each of the "majors" (Chemical, Civil, Electrical, Applied Mathematics, Mechanical and Production Management) provides opportunities for the student to structure a program that is applicable to employment needs.

Academic units can be transferred between the Industrial Technology program and the full-time specific technical curriculums with the approval of the department chairperson.

A total of 60 to 64 semester hours is required for the A.A.S. degree. A diploma may be granted at the completion of 30 to 32 semester hours. Departmental approval is required for both the degree and the diploma.

Program requirements vary from department to department. Students are advised to consult with the department chairperson.

Industrial Safety and Occupational Hygiene

This is a new program this year, and its primary objective is to prepare people to work in the rapidly growing field of industrial safety. People currently employed in security and fire protection or who have these responsibilities in industry will find this a valuable program. So will people who are interested in working in these areas.

Recently enacted Federal laws in the Occupational Safety and Health Act (OSHA) have provided strong incentives for companies to comply with them. Small businesses, industrial nurses and unions have already shown an interest in this field.

The courses will be given in the evening to enable people with full-time day jobs to enroll as part-time students. Full-time students at the College can also be accommodated by taking the industrial safety courses in the evening and the other academic courses that are included in the program during the day.

An Associate in Applied Science degree in Industrial Technology will be awarded after completion of the necessary 62 credits, and one can earn a diploma for completing 32 credits.

Bachelor of Technology Opportunity

SUNY at Binghamton offers a Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline. An AAS degree in Industrial Technology is acceptable, provided the student has completed MAT 142 Applied Calculus I and the Physics sequence of PHY 141 and PHY 142.

LIBERAL ARTS AND SCIENCES

The Liberal Arts curriculum is mainly a two-year university-parallel program designed especially for those who wish to continue their college education at a four-year school. Graduates of the College in its Liberal Arts program receive either the Associate in Arts or Associate in Science degrees, depending on which course of study they complete.

Students completing this curriculum, its science option or its other emphases will have a breadth of education that prepares them for many professional careers. The Science Option, for example, is excellent for those planning careers in forestry, chemistry, biology or other scientific areas. Those aspiring to become teachers, doctors, dentists, lawyers, pharmacists or law-enforcement officers will find alternatives in the Liberal Arts curriculum designed especially for them.

Students should be aware that many of these alternative curriculums pre-

sume a high level of preparation in the secondary school, and they should consult with faculty advisors or counselors when there is doubt about the adequacy of their pre-college academic background.

The Liberal Arts Division also sponsors two programs that lead to an Associate in Applied Science degree — Criminal Justice and Child Care. They are designed essentially for those currently employed in these fields, but a small number of full-time day students is enrolled in the Child Care program. Students planning to transfer to baccalaureate programs are urged to follow the appropriate models listed on page 41. Professional courses in Criminal Justice and Child Care are given in the evening.

To qualify for any degree at Broome Community College, students must present a cumulative grade point average of 2.0 or above.

Career Preparation

For a great number of careers a rich background in liberal studies, as is presented in the Associate in Arts (AA) and Associate in Science (AS) degree programs, is essential. Students are urged to utilize the college resources thoroughly, and as early as practicable, in locating useful information about their intended academic majors and their career aspirations.

The Liberal Arts advisement system is one which aims to match students with advisors who share their interests. If questions pertaining to career preparation, transfer opportunities and job placement cannot be answered by the faculty advisors, students will be directed to somebody who can. Key figures in the advisement picture are:

Academic Advisor

Counselor

Placement Officer

To start students thinking about a career and the preparation needed, a number of fields which suggest a Liberal Arts beginning is listed below. The college does not offer courses in all these areas, and in some cases the professional courses are taught at the junior/senior level in baccalaureate programs.

Advertising
Architecture
Art
Child Care
Communications
Community/Human Service
Computing
Counseling
Criminal Justice
Data Processing
Design
Energy Research
Environmental Affairs
Foreign Service
Government Service
Home Economics
Interior Design
International Business
Labor Relations
Library Science

Management
Medicine
Oceanography
Optometry
Personnel
Public Relations
Public Service
Publishing
Real Estate
Recreation
Social Work
Scientific Research
Sports Writing
Teaching
Technical Writing
Translating
Transportation
Travel/Tourism
Urban Planning

Students at work in a sculpturing class.



Communication With Students

The division maintains Bulletin Boards in the Titchener Hall lobby and outside the office in Titchener Hall, Room 108. Students are urged to check the boards regularly for information pertaining to academic advisement, career planning, cultural events, transfer opportunities, convocations and lectures, colloquia and the like. Important notices and messages for students will also be posted. **Check the boards!**

Academic Advisement

FULL-TIME STUDENTS

Every full-time student is assigned a faculty advisor. During the first few weeks of classes, students should meet with their advisors to discuss academic and career plans.

Students are *encouraged* to meet regularly with their advisors thereafter. All students are required to complete in the presence of their advisors a Registration Advisement Form prior to registering in subsequent semesters.

The Liberal Arts office personnel is available to deal with special problems relating to academic requirements and transfer. While the faculty and staff will make every reasonable effort to help students with academic planning, students must also assume responsibility for their programs and, particularly, in meeting degree requirements.

PART-TIME STUDENTS

Part-time day students who intend to matriculate in a degree program sponsored by the Liberal Arts Division should come to the office (Room 108 in Titchener Hall) to be assigned academic advisors. Students not interested in a degree, but, nevertheless, seeking academic advice, may do so in the Liberal Arts office. Part-time evening students will be advised by representatives from the Office of Continuing Education.

Transfer

Students who have earned A.A. or A.S. degrees at Broome Community College and who intend to go on for baccalaureate degrees are guaranteed transfer to a four-year college or university of the State University of New York (SUNY). There is no guarantee, however, that students can complete all degree programs at transfer institutions in four semesters.

Students are urged to learn as much as they can relative to program requirements at the institution(s) to which they might transfer. For example, many four-year schools require foreign language. The decision to take a language at Broome Community College might thus be influenced by whether or not it is required at the college to which one intends to transfer.

The Liberal Arts Division is in the process of establishing guaranteed transfer arrangements with other public and private colleges. Inquiries about these agreements, some in force and some in progress, should be made in Titchener Hall, Room 108.



A student delivers a speech in a speech class while it is being video-taped for self-analysis.

Distribution Requirements

The State University of New York requires that within the Liberal Arts portion of every degree program there be "reasonable" balance among three component areas — humanities, social sciences, science/mathematics.

Below are listed the Liberal Arts disciplines and their catalog designators, the groupings A, B, and C corresponding to the three categories noted above. This is for your reference when choosing elective courses for the program models presented on the following pages.

Group A (Humanities)	Group B (Social Sciences)	Group C (Science and Math)
Art (ART)	Anthropology (ANT)	Biology (BIO)
English (ENG)	Economics (ECO)	Chemistry (CHM)
French (FRE)	Geography (GEO)	Mathematics (MAT)
German (GER)	History (HIS)	Physics (PHY)
Italian (ITA)	Political Science (POS)	Physical Science (PHS)
Literature (LIT)	Psychology (PSY)	
Music (MUS)	Social Science (SOS)	
Philosophy (PHI)	Sociology (SOC)	
Spanish (SPA)		
Speech (SPK)		
Theater (THR)		

LIBERAL ARTS AND SCIENCES

Associate In Arts Degree

	Credits Required Per Year
Written Expression (as advised)	6
History (HIS 100 plus an elective)	6
Mathematics or elective (as advised)	0-8
Students who have completed fewer than 3 units of secondary school mathematics (through Intermediate Algebra) are required to take a minimum of 2 semesters of college level mathematics.	
... Students who have completed 3 units of secondary school mathematics (through Intermediate Algebra) are required to take one semester of college level mathematics....	
Students who have completed more than 3 units of secondary school mathematics (including Intermediate Algebra) are not required to take additional mathematics. They may, however, elect an appropriate math course or an elective in another field.	
Laboratory Science	8
A full-year <i>sequence</i> of biology, chemistry, physics or physical science. Students may defer this course until the second year and choose an elective instead in the first year. Acceptable sequences: (BIO 111-112; BIO 131-132; CHM 141-142; CHM 145-146; CHM 135-149; PHY 161-162; PHS 113, 115, 116)	
Philosophy or Foreign Language	6-8
Students are encouraged to take both, but they must complete a year (6-8 credits) of philosophy or a foreign language.	
Physical Education	2
No more than 2 credits can be used to fulfill degree requirements.	
Literature	6
Social Science	6
Courses designated by these letter symbols: (ANT, ECO, GEO, POS, PSY, SOC, SOS)	
Electives	14-24
A maximum of 15 credits may be taken outside the offerings of the Liberal Arts and Sciences Division with the approval of the Dean of the LA Division.	
Total number of credits	64 minimum

Science Option

Associate in Science Degree

FIRST YEAR FALL AND SPRING SEMESTERS		Credits Required Per Year
Written Expression (as advised)		6
History (HIS 100 plus and elective)		6
Mathematics or Philosophy or Foreign Language		6-8
Students who have not passed Advanced Algebra or its equivalent in high school (usually 3½-4 units) should take Algebra and Trigonometry or Pre-Calculus the first year followed by a year of Calculus with Analytic Geometry in the second year. Students must have the equivalent of Calculus with Analytic Geometry to take the non-math elective.		
2 Sciences		16
<i>Sequences</i> in biology, chemistry, physics or physical science to be taken for each of the 2 science requirements. (Recommended: BIO 111, 112; CHM 145-146; PHY 161-162; CHM 245-246)		
Physical Education (Can be deferred to second year)		2
SECOND YEAR FALL AND SPRING SEMESTERS		
Literature		6
Social Science		6
Courses designated by those letter symbols: (ANT, ECO, GEO, POS, PSY, SOC, SOS)		
2 Sciences		16
<i>Sequences</i> in biology, chemistry, physics or physical science to be taken for each of the 2 science requirements. At least 8 hours must be beyond the introductory level.		
Mathematics or LA Elective		6-8
Elective must be philosophy or a foreign language unless one of these was taken in the first year. Mathematics may be elected only with the Dean's approval if the Calculus and Analytic Geometry requirement was met in the first year.		
Total number of credits		72 minimum

LIBERAL ARTS AND SCIENCES

Math-Computer Science Emphasis (Associate in Science Degree)

This program can lead to interesting and challenging careers in computer science, mathematics or operations research. Electives must be approved by your advisor and should be chosen with your career goal and transfer institution in mind.

FIRST YEAR Fall Semester

			Credits
ENG	110	Written Expression I (as advised)	3
		Social Science Elective (ECO 110 Micro-economics suggested)	3
MAT	163	Calculus with Analytic Geometry I	4
MAT	151	Mathematical Modeling I	4
PED		Physical Education	1
			15

Spring Semester

LIT		Literature Elective	3
		Social Science Elective (ECO 111 Macro-economics suggested)	3
MAT	164	Calculus with Analytic Geometry II	4
MAT	252	Mathematical Modeling II	4
PHI	202	Logic	3
PED		Physical Education	1
			18

SECOND YEAR Fall Semester

			Credits
HIS	100	Laboratory Science Sequence	4
		Rise of the West	3
		Approved Electives	6-8
		*Elective	3-4
			16-18

Spring Semester

MAT	264	Laboratory Science Sequence	4
		Linear Algebra	4
		Approved Electives	3-4
		*Elective	4
			15-16

*Electives to be chosen from this list.

MAT 263 Calculus with Analytic Geometry III
MAT 266 Introduction to Higher Mathematics
MAT 243 Differential Equations
CST 110 Introduction to Data Processing
CST 112 Computer Logic
CST 118 Computer Programming - COBOL

CST 124 Computer Programming for Engineers
(FORTRAN IV)
CST 126 Assembly Programming - BAL
CST 130 PL/1
CST 200 Systems Analysis
CST 205 Advanced FORTRAN with Graphics

Mental Health and Retardation Emphasis

(Associate in Science Degree)

This course of study is for students who wish to transfer to upper division degree programs in mental health and human services, and for those seeking entry level preparation for positions in appropriate public and private agencies. Broad preparation during the first year is followed by greater concentration during the second year.

The number of students permitted to enter the second year of the program is limited by the availability of field placement openings in local agencies. Selection will take place during the spring semester of the Freshman year. Students who do not qualify can still complete A.A. degree requirements within the normal two-year period. For further details inquire at the Liberal Arts Division office in Titchener Hall.

FIRST YEAR Fall Semester

			Credits
ENG	110	Written Expression I	3
MAT	124	Statistics	3
HIS	100	Rise of the West Laboratory Science (BIO 131 Human Biology I recommended)	4
PSY	110	General Psychology	3
PED		Physical Education Elective	1
			17

Spring Semester

ENG	120	Written Expression II	3
SOC	110	Introduction to Sociology	3
PHI	206	Social/Political Philosophy Laboratory Science (BIO 132 Human Biology II recommended)	4
		*Elective	3
PED		Physical Education Elective	1
			17

SECOND YEAR Fall Semester

			Credits
PSY	223	Intelligence and the Mentally Retarded	3
PSY	217	Counseling and Interviewing Elective from Group A (page 37)	3
		Seminar in Community Social Service Organizations	3
		Elective	3
			15

Spring Semester

PSY	227	Behavior Modification	3
PSY	214	Abnormal Psychology	3
		Elective	3
		Elective	3
SOS	290	Social Science Field Work	3
			15

Non-Liberal Arts choices are also acceptable with approval from the Liberal Arts Office.

Interior Design Certificate Program

This is a 30-credit program primarily for individuals currently employed by design-related firms and for whom a deeper knowledge of interior design would be personally and professionally valuable. Those whose interests in design and decorating are not job-related are also encouraged to enroll in the program. (Some of these courses have prerequisites. Consult the course listings in this catalog — pages 53-93). Robert Keller is the program coordinator.

Course Number	Course Title	Credit
INT 110	Interior Design I	4
INT 111	Interior Design II	4
INT 120	Furniture Design I	2
INT 121	Furniture Design II	2
ART 101	Introduction to Art	3
INT 101	History of Design	3
INT 140	Fabric Analysis	2
CIV 117	Architectural Drafting I	2
INT 130	Rendering	2
PSY 110	General Psychology	3
BUS 262	Small Business Management	3

30

GRADUATION REQUIREMENT: 64 Credits

LIBERAL ARTS AND SCIENCES

Child Care

This program is for those currently employed in Child Care institutions, and for those who seek employment in the field after completing the program, which leads to an Associate in Applied Science degree. Anyone wishing to transfer to baccalaureate programs in Early Childhood Education or in related fields should follow the Associate in Arts (A.A.) model on page 41. Marilyn Schafer is the program coordinator.

The starting salary range for graduates of this program who prefer to go immediately to work is between \$6,800 and \$10,000 for those who become directors and \$5,000 to \$7,000 for those who become teachers or teacher aids. Those figures are for 10-month positions.

FIRST YEAR Fall Semester

		Credits
ENG	110	Written Expression
PSY	110	General Psychology
SOC	110	Introduction to Sociology
*CDC	100	Introduction to Education of Young Children
		Free Elective
PED		Physical Education Elective
		1
		16

Spring Semester

ENG/	LIT	English or Literature Elective	3
		Humanities (Group A) Elective	3
CDC	120	Curriculum Development	3
CDC	200	Social Psychology of Education	3
		Free Elective	3
PED		Physical Education Elective	1
			16

SECOND YEAR Fall Semester

		Credits
*CDC	170	Practicum I
PSY	211	Child Development
		Math/Science (Group C) Elective
*CDC		Child Care Elective
*CDC		Child Care Elective
		3
		15-16

Spring Semester

		Math/Science (Group C) Elective	3-4
*CDC		Child Care Elective	3
*CDC		Child Care Elective	3
*CDC	290	Practicum II	6
			15-16

*CDC courses are given mainly in the evening.

MODEL CAREER PROGRAMS

The following programs are shown as typical "models" for the careers indicated and should not be regarded as inflexible in the courses cited. These models are designed to give a student a chance to earn the Associate in Arts or the Associate in Science degree at BCC, so that he/she can continue at a four-year college or university in pursuit of a baccalaureate degree in the particular field.



BUSINESS (A.A. Degree) (For transfer to SUNY Binghamton and other SUNY units)			
FIRST YEAR Courses (Credits) Written Expression (6) History (6) Mathematics (6-8) Philosophy or Foreign Language (6-8) Accounting (8) Physical Education (2)		SECOND YEAR Courses (Credits) Literature (6) Science (8) Economics (6) Management and Organization (2) Behavioral Management (3) FORTRAN (3) Elective (3)	
PRE-LAW (A.A. Degree)		CRIMINAL JUSTICE (A.A. Degree)	
FIRST YEAR Courses (Credits) Science (8) Written Expression (6) History (6) Foreign Language (8) Mathematics (3-6) Physical Education (2)	SECOND YEAR Courses (Credits) Political Science (3) Social Science (6) Literature (6) Philosophy (3) Electives (12-15)	FIRST YEAR Courses (Credits) Written Expression (6) History (6) Mathematics (3-6) Introduction to Sociology (3) General Psychology (3) 2 Criminal Justice Courses (6) Physical Education (2)	SECOND YEAR Courses (Credits) Political Science (3) Literature (6) Chemistry (8) Philosophy (6) 3 Criminal Justice Courses (9) Elective (3)
PRE-MEDICAL or PRE-DENTAL (A.S. Degree)		PRE-PHARMACY (A.A. Degree)	
FIRST YEAR Courses (Credits) Biology (8) Chemistry (8) Written Expression (6) Calculus (8) History (6) Physical Education (2)	SECOND YEAR Courses (Credits) Organic Chemistry (10) Physics (8) General Psychology (3) Social Science Elective (3) Literature (6) Foreign Language (8)	FIRST YEAR Courses (Credits) Biology (8) Chemistry (8) Written Expression (6) History (6) Calculus (8) Physical Education (2)	SECOND YEAR Courses (Credits) Organic Chemistry (10) Physics (8) Economics (3) Social Science Elective (3) Foreign Language (8) Literature (6)
MUSIC (A.A. Degree)		PHYSICAL EDUCATION (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) Humanities or Italian (6-8) Mathematics (3-6) Introduction to Music (3) Instrumental Music (2) History (6) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Science (8) Music Theory (6) Social Sciences (6) Instrumental Music (2) Elective (3)	FIRST YEAR Courses (Credits) Written Expression (6) Human Biology (8) Philosophy or Language (6-8) History (6) Mathematics (3-6) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Psychology (3) Social Science Elective (3) Effective Speaking (3) Human Biology (8) Electives (6-9)
JOURNALISM (A.A. Degree)		RECREATION LEADERSHIP (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) History (6) Philosophy or Language (6-8) Science (8) Mathematics (3-6) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Psychology (3) Sociology (3) Social Problems (3) Political Science (3) Technical Writing (3) Electives (12)	FIRST YEAR Courses (Credits) Written Expression (6) Human Biology (6) Philosophy or Spanish (6-8) Mathematics (3-6) History (6) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Child Development (3) Psychology (3) Adolescent Psychology (3) Introduction to Sociology (3) Sociology (3) Art or Music (3) Electives (9)

FORESTRY TECHNOLOGY (A.A.S. Degree) By arrangement with the State University College of Environmental Science and Forestry (N.Y. State Ranger School at Wanakena), a two-year program leading to the Associate in Applied Science degree	
FIRST YEAR AT BCC Written Expression General Biology Mathematics College Algebra and Trigonometry Economics Effective Speaking Geology Technical Writing	
SECOND YEAR AT WANAKENA CAMPUS* Apply during Senior Year in High School to SUNY — N.Y. State Ranger School, Wanakena Campus, Wanakena, N.Y. 13695 and at Broome Community College informing both institutions of interest to complete first year at BCC. *Degree conferred at Wanakena	
SPECIAL EDUCATION (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) History (3) Philosophy (6) Mathematics (3-6) Human Biology (8) Physical Education (2) Psychology (3)	SECOND YEAR Courses (Credits) Literature (6) History (3) Psychology Elective (3-6) Effective Speaking (3) Fine Arts (6) Electives (6)
ART (A.A. Degree)	
FIRST YEAR COURSES (Credits) Written Expression (6) Introduction to Art (3) Studio Art (6) Humanities (6) Mathematics (6) Physical Education (2) Physical Anthropology (3)	SECOND YEAR Courses (Credits) Literature (6) History (6) Human Biology (8) Studio Art (6) Sculpture (3) Psychology (3)
ARCHITECTURE (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) Foreign Language or Philosophy (6-8) History (6) Calculus (8) Engineering Drawing (2) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Physics (8) Social Science (6) Mechanics (3) Architectural Drafting I & II (4) Studio Art (3) Math or Elective (3)
CHILD CARE (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) General Psychology (3) Introduction to Sociology (3) Mathematics (3-6) Human Biology (8) Introduction to Education of Young Children (3) Curriculum Development (3) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Philosophy or Language (6-8) History (6) Social Psychology of Education (3) 2 Child Care Courses (6) Elective (3)
THEATER (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) Introduction to Theater (3) BCC Theater (2) Mathematics (3-6) Humanities or Language (6-8) Physical Education (2) History (6) Acting (3)	SECOND YEAR Courses (Credits) Literature (6) Psychology (3) Social Science Elective (3) Science (8) Acting (3) Children's Theater (3) Electives (6)
PHYSICAL THERAPY (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) Trigonometry and/or Elective (6-8) General Psychology (3) General Biology (8) General Chemistry (8) Physical Education (1)	SECOND YEAR Courses (Credits) Literature (6) Psychology Electives (6) Physics (8) History (6) Electives (3-5) Physical Education (1)
PRE-EDUCATION (A.A. Degree)	
FIRST YEAR Courses (Credits) Written Expression (6) Science (8) Philosophy or Language (6-8) Mathematics (3-6) History (6) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Psychology (3) Sociology (3) Philosophical Issues (3) Electives (15)
ENVIRONMENTAL SCIENCE AND FORESTRY (A.S. Degree) (For transfer to SUNY-Syracuse Campus)	
FIRST YEAR Courses (Credits) Written Expression (6) Biology (8) Chemistry (8) Calculus (8) History (6) Physical Education (2)	SECOND YEAR Courses (Credits) Literature (6) Macro-Economics (3) Social Science Elective (3) Physics (8) Organic Chemistry (10) Philosophy or Language (6-8)

MARKETING

MANAGEMENT EMPHASIS

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

BUS 101	Accounting II	4	0	4
BUS 120	Business Law II	3	0	3
ENG 120	Written Expression II	3	0	3
MAT 117	*Elementary Finite Mathematics with Algebra	4	0	4
	or			
	Liberal Arts Elective	(3)	0	(3)
ECO 110	Micro Economics	3	0	3
		16-17	0	16-17

SECOND YEAR Fall Semester

BUS 115	Business Statistics	3	0	3
BUS 152	Selling Fundamentals	3	0	3
BUS 245	Management: A Behavioral Approach	3	0	3
CST 110	Introduction to Data Processing	3	0	3
SPK 102	Effective Speaking	3	0	3
	Social Science Elective	3	0	3
		18	0	18

Spring Semester

BUS 224	Business Finance	3	0	3
BUS 270	Decision Making	3	0	3
BUS 249	Personnel Management	3	0	3
PHS 111	Physical Science for Today	2	2	3
		13-14	2-4	15
CST 118	Elect 1 of the following: Computer Programming — COBOL	(2)	(2)	(3)
CST 120	Computer Programming — FORTRAN	(2)	(2)	(3)
	Business Elective	(3)	(0)	(3)

* If a student has passed Mathematics 11 or Intermediate Algebra in high school, he/she takes a Liberal Arts elective.

The study of Marketing at Broome Community College covers four emphases — management, sales, insurance, real estate. While the programs are career-oriented, approximately 35% of the students transfer to four-year colleges.

Those seriously considering transferring should choose the management

program, while those who intend to complete only two years of study will find the sales, real estate or insurance emphases more appropriate.

Mid-management employment positions are found in sales and other aspects of marketing services as well as managerial training programs in retail, wholesale and industrial organizations.

Starting salaries for graduates last year ranged up to \$13,416 and down to \$4,992 with the average pay \$7,668. Cooperative education opportunities exist in these programs, and considerable background pertaining to self-employment is incorporated within the subject matter.

SALES EMPHASIS

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

BUS 120	Business Law II	3	0	3
BUS 129	Consumer Behavior	3	0	3
BUS 152	Selling Fundamentals	3	0	3
BUS 249	Personnel Management	3	0	3
ENG 120	Written Expression II	3	0	3
		15	0	15

SECOND YEAR Fall Semester

BUS 229	Advertising	4	0	4
CST 110	Introduction to Data Processing	3	0	3
SPK 102	Effective Speaking	3	0	3
PHS 111	Physical Science for Today	2	2	3
BUS	Business Elective	3	0	3
ECO 110	Micro Economics	3	0	3
	or			
SOC 110	Introduction to Sociology	3	0	3
		18	2	19

Spring Semester

BUS 157	Business Report Writing	3	0	3
BUS 242	Marketing Seminar	3	0	3
BUS 245	Management: A Behavioral Approach	3	0	3
BUS 264	Retailing	3	0	3
	Liberal Arts Elective	3	0	3
PSY 110	Psychology	3	0	3
	or			
PSY 100	Psychology of Personal Adjustment	3	0	3
		18	0	18

INSURANCE EMPHASIS

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

ECO 111	Introduction to Macro-Economics ...	3	0	3
BUS 120	Business Law II	3	0	3
BUS 165	Principles of Insurance	3	0	3
ENG 120	Written Expression II	3	0	3
PSY 110	Psychology	3	0	3
		15	0	15

SECOND YEAR Fall Semester

**BUS 166	Property & Casualty Insurance	3	0	3
BUS 245	Management: A Behavioral Approach	3	0	3
CST 110	Introduction to Data Processing ...	3	0	3
SPK 102	Effective Speaking	3	0	3
PHS 111	Physical Science for Today	2	2	3
		14	2	15

Spring Semester

BUS 152	Selling Fundamentals	3	0	3
BUS 224	Business Finance	3	0	3
BUS 249	Personnel Management	3	0	3
	Social Science Elective	3	0	3
	*Business Elective	3-4	0	3-4
		15-16	0	15-16

* Suggested Business Electives include BUS 262 Small Business Management, BUS 229 Advertising, BUS 115 Business Statistics, BUS 247 Sales Management, BUS 170 Insurance for Agents and Brokers, BUS 297 Co-operative Work Experience.

MARKETING

REAL ESTATE EMPHASIS

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 112	Business Mathematics	2	0	2
BUS 100	Accounting I	4	0	4
BUS 118	Business Law I	3	0	3
BUS 141	Marketing	3	0	3
ENG 110	Written Expression I	3	0	3
		15	0	15

Spring Semester

ECO 111	Macro-Economics	3	0	3
BUS 160	Real Estate Principles	3	0	3
BUS 120	Business Law II	3	0	3
ENG 120	Written Expression II	3	0	3
PSY 110	Psychology	3	0	3
		15	0	15

SECOND YEAR Fall Semester

BUS 245	Management: A Behavioral Approach	3	0	3
CST 110	Introduction to Data Processing ...	3	0	3
SPK 102	Effective Speaking	3	0	3
PHS 111	Physical Science for Today	2	2	3
**BUS 162	Real Estate Investments	3	0	3
		14	2	15

Spring Semester

BUS 249	Personnel Management	3	0	3
BUS 224	Business Finance	3	0	3
BUS 152	Selling Fundamentals	3	0	3
	Social Science Elective	3	0	3
	*Business Elective	3-4	0	3-4
		15-16	0	15-16

* Suggested Business Electives include BUS 262 Small Business Management, BUS 229 Advertising, BUS 247 Sales Management, BUS 125 Real Estate Law, BUS 297 Co-operative Work Experience.

** If enrollment does not justify offering daytime sections, students must attend evening classes in these subjects.



Marketing student demonstrates the use of a product during the production of a TV commercial in an advertising class.

MECHANICAL TECHNOLOGY

The continuing thrust for faster and more economical manufacturing methods, more reliable systems and the need for new, clean and consistent sources of energy has generated an increased demand for mechanical technicians with a high degree of technical competence.

The curriculum outline of courses encompasses a blend of mathematics, science, English, social science and technical specialties conceived to generate the necessary background for a variety of entry positions in Mechanical Technology. These entry positions usually align closely with and support mechanical engineering or related functions.

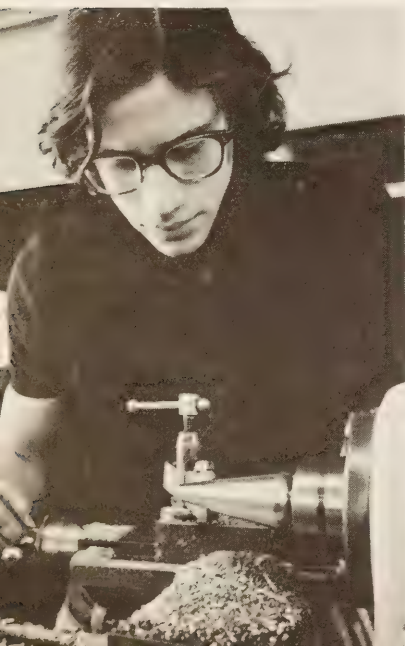
Recent graduates have been employed in areas of design-drafting, product design, quality control, metallurgy, heat-power, purchasing, sales, technical writing and system maintenance. They could be hired as technicians in quality control, mechanical

research, maintenance, customer engineering or in technical sales. Job opportunities exist both locally and nationally, and starting salaries for 1977 graduates averaged \$10,140.

Recruitment of graduates for employment by companies large and small is active year-round. Mechanical Technology is a particularly lucrative field for the female. Although few have ventured into the field, those who have are highly successful and happy. Industry is currently starving for female technicians.

This curriculum is accredited by the Engineers Council for Professional Development.

State University of NY at Binghamton offers a Bachelor of Technology program, for which the normal admission requirement is an AAS degree in an engineering technology discipline, such as Mechanical Technology.



Mechanical Technology students operating a lathe to produce a plumb bob in the Manufacturing Processes Laboratory.

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
EGR 110	Introduction to Technologies	1	0	1/2
MAT 141	College Algebra and Trigonometry ..	4	0	4
MET 113	Engineering Drawing I	1	2	2
MET 121	Manufacturing Processes I	2	2	3
PHY 141	Physics	3	2	4
ENG 110	Written Expression I or	3	0	3
ENG 100	Basic Language Skills Social Science Elective	3	0	3
		17	6	19 1/2

Spring Semester

MAT 142	Applied Calculus I	4	0	4
MET 114	Engineering Drawing II	1	2	2
MET 122	Manufacturing Processes II	1	3	2
MET 132	Applied Mechanics	4	0	4
PHY 142	Physics	3	2	4
ENG	English Requirement	3	0	3
		16	7	19

SECOND YEAR Fall Semester

CST 122	Scientific Computer Programming — FORTRAN	2	2	3
EET 185	Electricity	2	3	3
MET 235	Strength of Materials	2	3	3
MET 241	Fluid Mechanics and Thermodynamics	2	3	3
MET 261	Engineering Statistics, Quality Control and Reliability	2	2	3
	Social Science Elective	3	0	3
		13	13	18

Spring Semester

EET 186	Electronics	2	3	3
MET 238	Mechanical Design	3	3	4
MET 252	Engineering Materials and Industrial Processes	3	3	4
MET 244	Thermodynamics	2	3	3
	*Technical Elective	(2-3)	(2-0)	(3)
		10-13	12-14	14-17

* Waiver of the elective is possible only with the approval of the Department Chairperson. It is not a degree requirement.

GRADUATION REQUIREMENT: 70 1/2 CREDITS

MEDICAL LABORATORY TECHNOLOGY

The demand for medical laboratory technicians continues to increase, with the majority finding employment in hospital clinical laboratories and in analytical, control and research laboratories of chemical and pharmaceutical companies. Others are employed as research assistants at large universities and still others have continued their higher education toward the baccalaureate in this field at a four-year college or university.

Some graduates also become quality control technicians or laboratory technicians. The salary range for graduates of the Class of 1977 was between \$11,180 and \$8,000.

To provide the background necessary for work in these areas, the program in-

cludes courses in chemistry, physiology, microbiology and physics.

Extensive laboratory work in bio-analytical procedures, chemical instrumentation, microbiological and serological techniques and radiation physics helps to develop the skill needed for a wide range of job opportunities.

Work in the sciences is balanced by a program in general education including social sciences, English, and mathematics.

Satisfactory completion of 12 weeks of summer clinic experience is required. While there is no salary or direct credit associated with this experience, it is a vital and integral part of the students' educational experience.

A Medical Laboratory Technology student obtaining a blood sample from her partner in a Hematology Laboratory.



FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BIO 131	Human Biology I	3	2	4
CHM 131	Chemistry	3	3	4
ENG 110	Written Expression I	3	0	3
MAT 124	Statistics	3	0	3
MLT 111	Introduction to Clinical Laboratory Methods and Practices	1	2	2
		13	7	16

Spring Semester

BIO 132	Human Biology II	3	2	4
BIO 150	Microbiology I	3	3	4
CHM 132	Chemistry	3	3	4
MLT 112	Hematology	2	4	3
ENG 120	Written Expression II or	3	0	3
SPK 102	Effective Speaking			
		14	12	18

Summer Term

*Summer Clinical Laboratory of 6 weeks

SECOND YEAR Fall Semester

CHM 221	Organic Chemistry	2	3	3
MLT 211	Clinical Chemistry I	2	6	4
MLT 251	Microbiology II (Diagnostic)	3	4	4
PHY 116	Physics	2	2	3
	Social Science Elective	3	0	3
		12	15	17

Spring Semester

CHM 222	Organic Chemistry	2	3	3
CHM 224	Instrumental Analysis	2	6	4
MLT 212	Clinical Chemistry II	2	6	4
MLT 222	Clinical Physiology	2	0	2
MLT 232	Blood Banking and Serology	2	2	3
	Social Science Elective	3	0	3
	(ECO 107 Medical Economics and Law recommended)			
		13	17	19

Summer Term

*Summer Clinical Laboratory of 6 weeks.

*GRADUATION REQUIREMENT



Medical Office Assistant students doing a microscopic urinalysis in the Medical Assisting Clinical Laboratory.

MEDICAL OFFICE ASSISTANT

The medical office assistant has many employment opportunities in physicians' offices and related fields. Some of these are in medical centers, nursing homes, research centers, hospital administrative offices and as a medical assistant affiliated with a school health department.

Graduates of this program in the class of 1977 averaged \$6,067 as a starting salary.

Broome Community College prepares students for this career by offering specialized training that combines medical office management in administrative and clinical areas with laboratory procedures.

In addition to basic knowledge of such skills as typing, accounting and office procedure, the assistant will have technical background in such subjects as anatomy, physiology, microbiology,

pharmacology and chemistry. Courses in English and social sciences provide a general background. Laboratory procedures of a physician's office such as urinalysis, hematology, electrocardiography, audiography and eye refractions complete the program of studies.

Students gain practical experience in administrative responsibilities, clinical laboratory procedures and assisting the physician in medical offices two days a week during the last semester of the senior year.

The Medical Office Assistant Program is accredited by the Council on Medical Education of the American Medical Association in collaboration with The American Association of Medical Assistants. Graduates may become fully certified by taking the Medical Assistants Certification Examination.

First Year Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO 131	Human Biology I	.....	3	2	4
ENG 110	Written Expression I	.....	3	0	3
MOA 102	Medical Assisting Science	.....	2	0	2
MOA 112	Standard First Aid and Personal Safety	.....	0	2	1
MRT 105	Medical Terminology	.....	2	0	2
*SEC 101 or 102	Typewriting	.....	2	3	3
			12	7	15

Spring Semester

BIO 132	Human Biology II	.....	3	2	4
ENG 120	Written Expression II	.....	3	0	3
MOA 115	Medical Assisting Procedures	.....	3	2	4
MRT 107	Medical Transcription	.....	0	4	2
MRT 115	Medical Terminology	.....	2	0	2
			11	8	15

SECOND YEAR Fall Semester

BIO 160	Microbiology	.....	2	3	3
MOA 206	Medical Office Management	.....	3	3	4
MOA 211	Medical Assisting Procedures	.....	2	4	4
PSY 110	Psychology	.....	3	0	3
SPK 102	Effective Speaking	.....	3	0	3
			13	10	17

Spring Semester

ECO 107	Medical Economics and Law	.....	3	0	3
MOA 201	Medical Assisting Procedures	.....	2	4	4
MOA 245	Directed Practice	.....	1	16	5
MOA 210	Pharmacology	.....	2	0	2
			8	20	14

* Based on placement test

MEDICAL RECORD TECHNOLOGY

A medical record is the permanent report of a person's illness or injury kept to preserve information of medical, scientific and legal value. The record includes all medical reports which describe how the patient's illness was diagnosed and treated. Medical records are needed to help doctors diagnose and treat future illness, to verify insurance claims, to plan hospitals, to inform the public health officials, and to aid researchers.

The medical record technician works in the medical record department of a hospital, clinic, nursing home, school of veterinary medicine or other health facility and is responsible for many aspects of preparing, analyzing and preserving health information needed by the patients, by the hospital and by the public. The duties include reviewing medical records for completeness and accuracy and also translating diseases and operations into the proper coding symbols.

Other duties include filing medical records, preparing records for micro-filming, typing reports of operations, X-rays and laboratory examinations, as well as histories, physical examinations and discharge summaries, compiling

statistics of many kinds, assisting the medical staff by preparing special studies and tabulating data from records for research. Supervising the day-to-day operation of a medical record department, taking records to court and maintaining the flow of health information are also parts of the total work picture.

Practice in college medical record laboratory as well as in medical record departments of cooperating hospitals and other health care facilities, either within or outside the area, provides opportunities for additional educational experience which is the vital core of the program.

This curriculum is accredited by the Council on Medical Education of the American Medical Association and by the American Medical Record Association. Students in this program are eligible to take the Medical Record Accreditation Examination following graduation and upon completion receive the title of Accredited Record Technician (ART). They normally earn in the \$8,000 to \$10,000 range as starting salaries. Graduates can continue medical record education toward a baccalaureate degree at four-year colleges.

Medical Record Technology students studying a model of the human arm in the Human Biology Laboratory.



FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
MRT	101	Medical Record Science	2	2	3
MRT	105	Medical Terminology	2	0	2
*SEC	101 or 102	Typewriting	2	3	3
			12	7	15

Spring Semester

BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression II	3	0	3
MRT	107	Medical Transcription	0	4	2
MRT	110	Medical Record Science	2	4	4
MRT	115	Medical Terminology	2	0	2
SOC		Social Science Elective	3	0	3
			13	10	18

Summer Term

**MRT	144	Directed Practice	40 Hours per week for 4 weeks		
					4 Credits

SECOND YEAR Fall Semester

CST	110	Introduction to Data Processing	3	0	3
SPK	102	Effective Speaking	3	0	3
MRT	202	Medical Record Science	2	2	3
MRT	208	Advanced Medical Transcription	0	3	1
MRT	216	Clinical Practicum	0	2	1
SOC		Social Science Elective	3	0	3
			11	7	14

Spring Semester

MRT	210	Medical Record Science	2	2	3
**MRT	245	Directed Practice	0	16	4
MRT	295	Medical Record Seminar	2	0	2
BIO	140	Pathophysiology	2	0	2
SOC		Social Science Elective	3	0	3
			9	18	14

*Based on Placement Test

**GRADUATION REQUIREMENT

NURSING

Broome Community College offers a two-year, college-based curriculum to prepare graduates for immediate entrance into the first level of registered nursing. Graduates of this curriculum are eligible to take the New York State licensing examination for registered nurses. They are qualified for immediate employment in bedside nursing care, or they may wish to continue their education for the baccalaureate and higher degrees in the nursing field. Most graduates have recently found starting salaries between \$6,552 and \$10,816 a year.

The curriculum operates as a college

program, with classes and laboratories held on the campus. Clinical instruction is in the cooperating hospitals of the Triple Cities. The clinical experiences, which are an integral part of the Nursing curriculum, include caring for individuals in all age groups, as well as observation periods in community health and welfare agencies.

Mature men and women are encouraged to enter this program along with recent high school graduates, whether they are married or single.

This program is accredited by the National League of Nursing.

Nursing students assisting an individual in a hospital during their clinical experience.



FIRST YEAR Fall Semester

			Hours per Week		Credits per Semester
			Class	Lab	
*ADN	100	Meeting Basic Human Needs	5	6	7
BIO	131	Human Biology I	3	2	4
ENG	110	Written Expression I	3	0	3
PSY	110	General Psychology	3	0	3
			14	8	17

Spring Semester

*ADN	101	Nursing Care During the Life Cycle ..	5	6	7
BIO	132	Human Biology II	3	2	4
ENG	120	Written Expression I	3	0	3
SOC	110	Introduction to Sociology	3	0	3
			14	8	17

SECOND YEAR Fall Semester

*ADN	203	Immobility Concepts	5	9	4
			(Half Semester - 7½ weeks)		
*ADN	204	Regulatory Concepts	5	9	4
			(Half Semester - 7½ weeks)		
*ADN	205	Psychological Concepts I	1	3	2
BIO	150	Microbiology I	3	3	4
			3	0-3	3-4
			12	15-18	17-18

Spring Semester

*ADN	206	I, I and O Concepts	5	9	4
			(Half Semester - 7½ weeks)		
*ADN	207	Oxygenation Concepts	5	9	4
			(Half Semester - 7½ weeks)		
*ADN	208	Psychological Concepts II	1	3	2
ADN	295	Nursing Seminar	2	0	2
			3	0-3	3-4
			11	12-15	15-16

*Laboratory experiences for Nursing students may be scheduled during evening hours on their regular laboratory days.

RADIOLOGIC TECHNOLOGY (X-RAY)

The radiographer finds employment in hospitals, with doctors who maintain private practices, with government agencies, both civil and military, and in industry. The work of the radiographer consists of making radiographs used in the diagnosis of disease and injury. The radiographer must also be competent in protecting the parts of the body which are not to be exposed to radiation and in operating X-ray equipment and developing film.

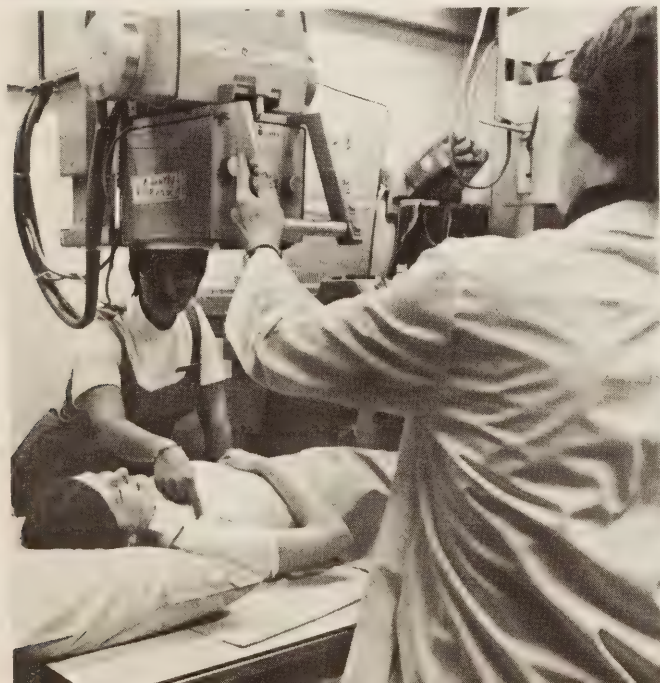
The Radiologic Technology program at Broome Community College consists of two academic years on campus and two summers at cooperating hospitals, the equivalent of 24 calendar months. The curriculum is an extremely active one, in which the student is responsible

for maintaining academic requirements on campus as well as fulfilling the practical application of this theory at cooperating hospitals. Students should note carefully the demanding time requirements of this curriculum.

The clinical experience is a viable part of the educational process. Upon completion of 2200 hours of clinical practice as well as the academic requirements of the program, the graduate is eligible to take the New York licensing examination in October and the examination of the American Registry of Radiologic Technologists in November. Summer clinical experience is required for graduation.

Starting salaries for graduates are in the \$8,500 to \$10,000 range.

Radiologic Technology student positions a classmate for a radiograph in the College's X-Ray Laboratory.



FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BIO 131	Human Biology I	3	2	4
ENG 110	Written Expression I	3	0	3
RAD 100	Introduction to Radiologic Technology (Half Semester)	2	0	1
RAD 101	Radiologic Technology I	3	1	3
RAD 110	Methods of Patient Care	1	2	2
RAD 130	Directed Practice (Half Semester) ...	0	18	3
		12	23	16

Winterim I

*RAD 131	Extended Campus Laboratory —	40 Hours per week for 2 weeks		
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Spring Semester

BIO 132	Human Biology II	3	2	4
ENG 120	Written Expression II	3	0	3
PHY 116	Physics	2	2	3
RAD 102	Radiologic Technology II	3	0	3
RAD 132	Directed Practice	0	18	4
		11	22	17

Summer Term I

*RAD 133	Summer Extended Campus Laboratory —	40 Hours per week for 12 weeks		
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SECOND YEAR Fall Semester

PSY 110	General Psychology	3	0	3
RAD 210	Radiologic Physics	4	0	4
RAD 220	Radiologic Pathology	2	0	2
RAD 230	Directed Practice	0	18	4
	Free Elective	3	0	3
		12	18	16

Winterim II

*RAD 231	Extended Campus Laboratory —	40 Hours per week for 2 weeks		
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Spring Semester

ECO 107	Medical Economics and Law	3	0	3
RAD 215	Nuclear Medicine and Radiation Therapy	1	0	1
RAD 225	Special Radiographic Procedures	3	2	4
RAD 232	Directed Practice	0	16	3
RAD 240	Radiation Health	2	1	2
RAD 295	Seminar in Radiography	2	0	2
		11	19	15

Summer Term II

*RAD 233	Summer Extended Campus Laboratory —	40 Hours per week for 12 weeks		
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*GRADUATION REQUIREMENT

SECRETARIAL SCIENCES

Broome Community College offers three options of study in Secretarial Sciences — Engineering Secretary, Executive Secretary, and Office Services Assistant. The department also offers a one-year certificate in General Office. Graduates of the options usually obtain immediate employment as stenographers, secretaries or office assistants. Graduates of the options usually obtain immediate employment as stenographers secretaries, private secretaries or office assistants. Graduates a year ago averaged \$7,291 as starting salaries.

Engineering Secretarial students study engineering terminology to understand the specialized language of

the engineer, and they are well prepared to work on engineering reports, records and correspondence.

Executive Secretarial students study terminology in such fields as law, education, insurance, real estate and investments so that they can understand the specialized language used in the professions, as well as in government and business firms.

Office Services Assistant students study a variety of courses including accounting, typing, office management and personnel management. The graduates of the Office Services Assistant option should find employment in word processing centers and other areas of office service work.



Secretarial student using dictation equipment in the College's Office Practices course.

ENGINEERING (INDUSTRIAL) SECRETARY OPTION

FIRST YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
ENG 110	Written Expression I	3	0	3
*SEC 101 or 102	Typewriting	2	3	3
**SEC 110	Shorthand or Alternate	2-3	3-0	3
		13-14	6-3	15

Spring Semester

ENG 120	Written Expression II	3	0	3
***SEC	Typewriting	2	3	3
	or Business Elective	(3)	(0)	(3)
SEC 111	Shorthand and Transcription	2	5	4
SPK 100	Basic Speaking	2	0	2
	Science Elective	2-3	2-0	3
		11-13	10-8	15

*Test will determine which course

**Based on student's record

***SEC 102 or SEC 104 Typewriting must be completed

SECOND YEAR Fall Semester

		Hours per Week		Credits per Semester
		Class	Lab	
MET 129	Survey of Engineering Laboratories	2	2	3
SEC 151	Business Communications	3	0	3
SEC 230	Advanced Shorthand	2	3	3
SEC 240	Office Practice	0	4	2
	Social Science Elective	3	0	3
	Liberal Arts Elective	3	0	3
		13	9	17

Spring Semester

SEC 212	Technical Typewriting	2	2	3
SEC 234	Specialized Dictation: Engineering ...	2	3	3
SEC 242	Secretarial Procedures	3	1	3
	Business Elective	3	0	3
	Social Science Elective	3	0	3
SEC 260	Model Office	2	2	3
		15	8	18

EXECUTIVE SECRETARY OPTION

FIRST YEAR Fall Semester

		Hours per Week		Credits
		Class	Lab	per Semester
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
ENG 110	Written Expression I	3	0	3
*SEC 101 or 102	Typewriting	2	3	3
**SEC 110	Shorthand or Alternate	2-3	3-0	3
		13-14	6-3	15

Spring Semester

ENG 120	Written Expression II	3	0	3
***SEC	Typewriting	2	3	3
	or Business Elective	(3)	(0)	(3)
SEC 111	Shorthand and Transcription	2	5	4
SPK 100	Basic Speaking	2	0	2
	Science Elective	2-3	2-0	3
		11-13	10-8	15

*Test will determine which course

**Based on student's record

***SEC 102 or SEC 104 Typewriting must be completed

SECOND YEAR Fall Semester

BUS 118	Business Law I	3	0	3
ECO 110	Introduction to Micro-Economics	3	0	3
SEC 151	Business Communications	3	0	3
SEC 230	Advanced Shorthand	2	3	3
SEC 240	Office Practice	0	4	2
SEC 260	Model Office	2	2	3
		13	9	17

Spring Semester

ECO 111	Introduction to Macro-Economics ...	3	0	3
SEC 210	Executive Typewriting	2	2	3
SEC 232	Specialized Dictation: Executive	2	3	3
SEC 242	Secretarial Procedures	3	1	3
	Free Elective	3	0	3
	Liberal Arts Elective	3	0	3
		16	6	18

OFFICE SERVICES ASSISTANT OPTION

FIRST YEAR Fall Semester

		Hours per Week		Credits
		Class	Lab	per Semester
BUS 100	Accounting I	4	0	4
BUS 112	Business Mathematics	2	0	2
*SEC 101 or 102	Typewriting	2	3	3
ENG 110	Written Expression I	3	0	3
	Liberal Arts Elective	3	0	3
		14	3	15

Spring Semester

BUS 101	Accounting II	4	0	4
**SEC 102	Typewriting	2	3	3
	or Business Elective	(3)	(0)	(3)
ENG 120	Written Expression II	3	0	3
SEC 151	Business Communications	3	0	3
PHS 111	Physical Science	2	2	3
		14-15	3-2	16

SECOND YEAR Fall Semester

BUS 118	Business Law I	3	0	3
ECO 110	Introduction to Micro-Economics	3	0	3
CST 110	Introduction to Data Processing	3	0	3
SPK 100	Basic Speaking	2	0	2
	Business Elective	3	0	3
	Liberal Arts Elective	3	0	3
		17	0	17

Spring Semester

BUS 261	Office Management	2	0	2
BUS 249	Principles of Personnel Management	3	0	3
ECO 111	Introduction to Macro-Economics ...	3	0	3
SEC 244	Office Practice/Procedures	2	3	3
SEC 260	Model Office	2	2	3
	Liberal Arts Elective	3	0	3
		15	5	17

*Test will determine which course

**SEC 102 or SEC 104 Typewriting must be completed

GENERAL OFFICE CERTIFICATE PROGRAM

The object of this one-year certificate program is to equip individuals with entry-level skills for placement with various business firms in the Broome County area. Students can choose elective courses in the accounting, marketing or secretarial field to enable them to give a particular emphasis to their studies. No high school diploma is required. This program is given by the Secretarial Sciences Department.

Such courses as Office Machines, Business Communications, and Office Procedures are given here, along with classes in Written Expression, Psychology and Typewriting.

Fall Semester				Credits	Spring Semester				Credits
*SEC 101 or 102	Typewriting			3	SEC 102	Typewriting			3
BUS 110	Introduction to Business			3	or	or			
ENG 100	Basic Language Skills			3	BUS 151	Business Elective			3
or	or				SEC 246	Office Machines			3
ENG 110	Written Expression I			3	SEC 248	Office Procedures			3
Elect 1 of the following					BUS	Business Elective			3-4
PSY 100	Psychology of Personal Adjustment								15-16
PSY 110	General Psychology								
SAC 101	The Individual in a Changing Environment								
SAC 295	Seminar in Human Potential								
BUS	Business Elective			3-4					
				15-16					

*A test will determine which course

DIPLOMA AND CERTIFICATE PROGRAMS

Diploma and certificate programs generally consist of half the number of credits in an associate degree curriculum and therefore earn the recipient about one year of college credit. They have varying objectives, as some are designed to prepare students for jobs that require specialized higher education, but not necessarily a college degree; some provide students with an opportunity to upgrade their academic backgrounds or expand their qualifications for a particular field of study; and some offer college credits and additional training to people already working in the field.

Most of the diploma and certificate offerings carry college credits, and they can lead a person into some of Broome Community College's degree-granting curriculums. They can be taken on a full-time or part-time basis, and most of them are offered in the evening although some are available through day classes. No specific high school courses are required for enrollment.

For further details, a listing of courses and literature about these diploma and certificate programs, contact the BCC Office of Continuing Education (Wales Building, Room 108 or phone 772-5012).

Diploma Programs

Business Emphases
Accounting
Computer Studies
Management
Marketing/Sales/Retailing
Child Care
Criminal Justice
Fire Protection Technology
Liberal Arts

Industrial Technology Emphases
Applied Mathematics
Chemical
Civil
Computer Studies
Electrical
General Technical Studies
Industrial Safety and Occupational
Hygiene
Mechanical
Production Management

Certificate Programs

*Basic Electronics
Data Processing
Dietetic Assistant

General Office
Interior Design
Legal Secretarial

*Conducted in conjunction with Tompkins Cortland Community College in Dryden, N.Y.



Course Descriptions

All courses listed in this section are scheduled to be offered during the 1978-79 academic year, unless otherwise indicated. The offering of any course, however, is subject to sufficient enrollment. Courses numbered from 100 to 199 are generally first-year courses, and those numbered in the 200's are usually taken in the second year.

ACCOUNTING, BUSINESS ADMINISTRATION AND MARKETING COURSES

BUS 100 Accounting I 4 Credits

Basic concepts and procedures in the accounting cycle. Emphasis on journals, ledgers and financial statements, payroll systems and merchandise inventory systems.

4 Class Hours

BUS 101 Accounting II 4 Credits

Deferrals and accruals, plant assets and intangible assets, partnerships, corporations and manufacturing.

4 Class Hours

Prerequisite: BUS 100 Accounting I

BUS 102 Payroll Accounting 2 Credits

A comprehensive study of Federal and State laws and regulations affecting payrolls and payroll taxes. Practical report preparation and reporting requirements. Proper accounting practices to record payroll taxes.

2 Class Hours

***BUS 110 Introduction to Business 3 Credits**

General background of modern business practices through the study of organization and management, production, human resources, accounting and finance, marketing, and the information needed for control and management decisions in business and society.

3 Class Hours

BUS 112 Business Mathematics 2 Credits

Number systems and arithmetic processes. Problems in percentage, simple interest, compound interest, discounting notes, depreciation, insurance, taxes and problems in accounting and marketing.

2 Class Hours

BUS 115 Business Statistics 3 Credits

Concepts and mechanics of measures of central tendency, measures of dispersion, probability and correlation as they relate to general problems in business and economics.

3 Class Hours

Prerequisite: MAT 003 Basic Mathematics Review A or equivalent

BUS 118 Business Law I 3 Credits

Law as an evolutionary and democratic process. Court structure, administrative law, law-of-contracts, legal principles of agency and partnerships.

3 Class Hours

BUS 120 Business Law II 3 Credits

The law governing the negotiation or transfer of commercial paper and the sale of personal property. The law of personal and real property and sundry topics: bailments, insurance, landlord-tenant relationships, corporate and labor law.

3 Class Hours

Prerequisite: BUS 118 Business Law I

***BUS 125 Real Estate Law 5 Credits**

For real estate people preparing for the New York State Real Estate Broker's Licensing Examination. Under the supervision of the New York State Department of Licenses. (Credits applicable only to Business program with prior approval from the Business Division.)

5 Class Hours

BUS 129 Consumer Behavior 3 Credits

Emphasizes the development of how people make purchase decisions in the market place. Consumer decision-making, learning, brand loyalty and market segmentation.

3 Class Hours

BUS 131 Personal Finance**3 Credits**

Guidelines to everyday financial problems regarding budgeting, installment buying, credit, insurance, taxes, savings, investments and purchasing such long-term investments as a home or automobile.

3 Class Hours***BUS 135 Investments****2 Credits**

Application of sound investment principles as they relate to stocks and bonds. Importance of the stock markets, their operation and their place in our society. Current happenings such as over-all market behavior, stock splits, rights and offerings will be studied in various companies, making the subject matter current and relevant to financial events of the day. A model portfolio approach with weekly review by class participants

2 Class Hours***BUS 138 Income Tax I****1 Credit**

Basic Federal income tax rules and regulations for the preparation and filing of personal income tax forms. Personal exemptions, exemptions for dependents, gross income inclusions and exclusions, itemized and standard deductions, tax tables and rates.

1 Class Hour***BUS 139 Income Tax II****1 Credit**

Preparation of personal income tax returns involving more complicated items, such as capital gains and losses, rental property, dividends, other income and special deductions.

1 Class Hour***BUS 140 Taxes for Small Business****2 Credits**

Basic Federal and State laws, regulations and rules governing the preparation of income tax returns for small businesses with major emphasis on single proprietorships and partnerships.

2 Class Hours**BUS 141 Marketing****3 Credits**

The planning and strategy formulation of marketing foods, services, ideas or people, including the principal environmental opportunities and constraints facing the manager of both profit and non-profit organizations. Marketing mix (product, price, place, promotion) and the marketing concept. Lecture, discussion, and cases.

3 Class Hours***BUS 144 Domestic Transportation****2 Credits**

Analysis of practices, theories and policies of the transport network. Study of transportation changes — in the locations and movements of goods and people as well as in the physical and institutional organizations (mergers, conglomerates) and their effect on the entire scope of transportation.

2 Class Hours***BUS 147 Retail Buying/Merchandising****3 Credits**

The principles of what, when, where and how to buy in order to successfully purchase a stock of merchandise that can be resold at a profit. Analysis of merchandising mix, stock turns, and elements of effective display. Promotional aspects including point of sale, impulse and window displays.

3 Class Hours***BUS 149 Principles of Organization and Management****2 Credits**

An introduction to the principles, practices and problems of business organizations. A study of the management process — planning, organizing, staffing, directing and controlling.

2 Class Hours***BUS 150 Personnel Administration****2 Credits**

Techniques and methods to achieve utilization of manpower in business through proper selection, placement, training, job evaluation, wage setting and employee relations.

2 Class Hours**BUS 152 Selling Fundamentals****3 Credits**

Principles of sales with practical application. Steps leading to a successful sale — prospecting, planning and delivering, dramatizing, handling objections, closing, building good will. Development and presentation of a complete procedure for a product or service.

3 Class Hours***BUS 154 Purchasing****3 Credits**

Analytical approach to techniques employed in the industrial purchasing phase of marketing. Emphasis on the organization of the purchasing functions as an operational unit of the firm directed toward procurement activities.

3 Class Hours**BUS 157 Business Report Writing****3 Credits**

Training in logical analysis of business case problems, applied to the preparation of accurate written reports. Methods and skills in formal and informal business writing. Preparation of tables, charts, reference citations and bibliographies. Improvement of basic business writing skill involved in inter-office memos, letters of adjustment, bids, quotations, public relations.

3 Class Hours**BUS 160 Principles of Real Estate****3 Credits**

Economic and social impact of real estate. Emphasis on the real estate cycle dealing with the essentials of real property, finance and legal aspects.

3 Class Hours**BUS 162 Real Estate Investments****3 Credits**

Approach and basic methodology for analyzing a real estate investment. Emphasis is focused on liquidity, maximum current income, future income, protection from inflation, tax shelter, capital gains and principal protection.

3 Class Hours**BUS 165 Insurance****3 Credits**

Insurance principles and coverage, types of carriers, organizations, history of insurance, analysis of types of coverage available for business and individuals in the casualty and life fields.

3 Class Hours**BUS 166 Property and Casualty Insurance****3 Credits**

Common policy provisions relating to property and casualty insurance and surety. Topics include automobile liability and physical damage, workmen's compensation, general liability, New York Insurance Law, rating and multi-line coverage.

3 Class Hours***BUS 170 Insurance for Agents and Brokers****8 Credits**

Comprehensive survey of insurance. Fire, marine, automobile, owner liability, burglary, boiler, machinery, accident and health, fidelity and surety insurance. Insurance law and duties of the agent.

8 Class Hours

BUS 200 Intermediate Accounting I 4 Credits

An intensive study of accounting theory and procedures. Emphasis on balance sheet accounts and their interrelationships with income statement accounts. The accounting process and correction of errors. Advanced treatment of cash, receivables, inventories.

4 Class Hours

Prerequisite: BUS 101 Accounting II

BUS 201 Intermediate Accounting II 4 Credits

A more advanced treatment of accounting for fixed assets, intangible assets, current and long-term liabilities. Corporation accounting, funds flow reporting, financial statement analysis.

4 Class Hours

Prerequisite: BUS 200 Intermediate Accounting I

BUS 205 Cost Accounting I 4 Credits

Nature and purpose of cost accounting. Job order and process costing. Accounting for factory overhead and analysis of variances. Accounting for labor and material.

4 Class Hours

Prerequisite: BUS 101 Accounting II

BUS 206 Cost Accounting II 4 Credits

Further consideration of cost accounting principles, standard costs and variances. The construction of budgets, profit planning. Flexible budgets. Direct costing. Break even analysis. Accounting for by-products and joint products. Non-manufacturing costs.

4 Class Hours

Prerequisite: BUS 205 Cost Accounting I

***BUS 207 Managerial Accounting I 2 Credits**

Use of accounting information by management in decision making. Accounting procedures for the evaluation of performance and responsibility accounting in business and industry.

2 Class Hours

***BUS 208 Managerial Accounting II 2 Credits**

Relationship of accounting information to such areas of managerial responsibilities as planning and control, cash budgeting and cash flow, relevant cost analysis, profit planning and the effects of price level changes.

2 Class Hours

Prerequisite: BUS 207 Managerial Accounting I

BUS 220 Financial Information Systems 3 Credits

Development of practicable accounting systems to provide the information required for effective managerial control. Techniques of flow charting, developing written procedures, analysis of organization structures, form design applied to the basic area of business.

2 Class Hours, 2 Laboratory Hours

Prerequisite: BUS 101 Accounting II and CST 110

Introduction to Data Processing

***BUS 221 Mathematics for Business Analysis 2 Credits**

Basic quantitative mathematical methods for management. Techniques and their application to business problems. Foundation for further study of advanced principles of quantitative analysis.

2 Class Hours

Prerequisite: BUS 112 Business Mathematics

BUS 224 Business Finance 3 Credits

Financial principles and procedures. Detailed analysis of forms of business organizations. Single proprietorship, partnerships and corporations together with all financial instruments, surplus, reserves and equities. Application of ratios, rules for budgeting, capitalization, insurance, reorganization.

3 Class Hours

***BUS 226 Credit and Collections 3 Credits**

Nature and role of credit, credit management, types of credit, credit department organization, credit reports and investigation, collection procedures, investigation and analysis of mercantile and financial institution credit risks, analysis of financial statements. It is suggested that BUS 100 Accounting I be taken prior to this course.

3 Class Hours

BUS 229 Advertising 4 Credits

Development, economies, functions of advertising. Cost application, media, testing and research methods. Development of advertisements, copy and layout, methods and problems of reproduction. Planning the advertising campaign with step by step developments. Lectures, discussions, demonstrations. BUS 141 Marketing is recommended as preparation for this course

4 Class Hours

***BUS 238 Marketing Research 3 Credits**

Methods of collecting and interpreting marketing information which affect marketing management. Specific applications to problem identification in market development, gauging market potential and implementation of research designs in the market place. It is suggested that BUS 115 Business Statistics be taken prior to this course.

3 Class Hours

BUS 242 Marketing Seminar 3 Credits

Senior capstone course which integrates various business subjects previously studied. Individual and team approach to analysis of comprehensive marketing and management cases and cooperative consideration of alternative decisions to problem solving.

3 Class Hours

Prerequisite: Permission of Chairperson of Marketing Management

Department for non-marketing majors

***BUS 243 Industrial Management 2 Credits**

Fundamentals of organization and management of industrial concerns. Emphasis upon leadership, human behavior, analysis in decision making. Examination of problem solving in industrial enterprises and applying management principles.

2 Class Hours

BUS 245 Management: A Behavioral Approach 3 Credits

A comprehensive analysis of managerial theories and an integration of selected social sciences to investigate organizational problems related to managerial functions. Communications, decision-making, control theory. Impact of the organizational environment upon human behavior.

3 Class Hours

***BUS 246 Principles of Management 3 Credits**

Principles of managerial practices. Planning, organizing, directing, and controlling. Exposes students to proper methods and techniques to achieve employee and job satisfaction. Topics covered include scientific management, behavioral theory, and introduction to management science.

3 Class Hours

BUS 247 Sales Management*3 Credits**

Development of control techniques in the administration of sales forces. Incentive systems, territory planning, development of sales potentials, personnel problems peculiar to this field.

3 Class Hours**BUS 249 Personnel Management****3 Credits**

Principles of managerial practices. The four functions of management — planning, organizing, directing and controlling. Designed to expose the student to the proper methods and techniques to achieve employee and job satisfaction. Processing, developing, maintaining and proper utilizing of the labor force. A review of the history and impact of organized labor incorporating economics, political and social pressures which influence employment.

Effective interview poise, personal appearance, interviewing techniques, job opportunities and placement services. Correct preparation of a resume and the utilization of references.

3 Class Hours***BUS 252 Supervision of Personnel****2 Credits**

Concepts and psychology of personnel supervision. Emphasis on the application of management theory through use of case studies and classroom discussions.

2 Class Hours***BUS 255 Industrial Labor Relations****2 Credits**

Processes of bargaining and contract administration between industrial employers and unions representing employees, as a system of compromising opposing objectives and setting differences. Origins of unions, how they organize and gain recognition and how the labor agreement is negotiated and administered. Interaction among employees, stewards and supervisors. Labor laws. Institutions such as the National Labor Relations Board, mediation services, arbitration boards and courts.

2 Class Hours**BUS 256 Labor Relations for Business and Industry****3 Credits**

Analysis of labor relations and collective bargaining procedures. Policies of organized labor, employers and government in solving labor-management disputes. Grievance procedure, wage and price policies, arbitration, mediation, negotiations and labor contracts.

3 Class Hours***BUS 257 Organizational Behavior****3 Credits**

Processes affecting the behavior of individuals and groups are examined with particular attention to their managerial implications. Relevant concepts and research evidence help students to analyze their experiences and generalize from them. Similarities and differences among effective organizational structures and managerial strategies in the public, private and non-profit sectors.

3 Class Hours***BUS 258 Human Relations in Business****2 Credits**

Basic psychological principles applied to the problems of employee selection, training, evaluation, merit rating and advancement. Social interaction and human relations in industry. Motivation concepts and techniques, job satisfaction, morale, conference leadership and employee and management development.

2 Class Hours***BUS 260 Management of Physical
Distribution — Transportation****2 Credits**

Rates, documentation and career liability (legal implications), factors in routing transportation in the milieu of physical distribution and current issues in the field.

2 Class Hours**Prerequisite:** BUS 144 Domestic Transportation***BUS 261 Office Management****2 Credits**

A comprehensive study of modern management principles and practices in office organization, operation and control. Office layout, personnel, office equipment, processing of information and the planning, flow and measurement of work within the office.

2 Class Hours**BUS 262 Small Business Management****3 Credits**

Designed for those interested in small business as owner-managers. Development of sound management and modern techniques covering organization, marketing, financing, insurance risk, legal implications, regulations, taxes.

3 Class Hours**BUS 264 Retailing****3 Credits**

Fundamentals of purchasing, merchandising, pricing, promotion. Principles of retail management. Coordination of accounting and basic marketing concepts at the market focal point.

3 Class Hours**BUS 270 Decision Making****3 Credits**

An introduction to managerial problems relating to the planning and controlling functions, which provide guidelines to making rational decisions. A realistic approach utilizing cases and simulation will be taken to expose the student to quantitative as well as subjective analysis to point out the constraints placed upon management.

3 Class Hours**Prerequisite:** BUS 115 Business Statistics**BUS 295 Accounting Seminar****3 Credits**

In-depth treatment of accounting for income taxes and payroll taxes. Concepts of conservatism, realization, going concern, current vs. historical costs. Current trends in accounting for leases, research and development costs, inventory pricing and depreciation disclosures.

2 Class Hours, 2 Laboratory Hours**BUS 297 Co-operative Work Experience****1-3 Credits**

Cooperative education is available to students in the marketing management, marketing sales and accounting curriculums. On-the-job experience may be obtained in such areas as retailing, banking, fast foods, government services and hotel management, as well as in CPA firms, public accounting offices, industrial, business and government offices where accounting is performed. To be eligible for these opportunities a student must maintain an over-all cumulative grade-point average of 2.5, with a 3.00 average in business courses, and have no NC's.

Co-operative work students will meet with the coordinator one hour each week.

BUS 299 Independent Study**1-4 Credits**

The student, under the guidance of a faculty member, undertakes an investigation, study and research in an advanced concept or problem concerning his/her major field of study. Only one independent study course is allowed per semester.

Prerequisite: Approval of Faculty Member and Department Chairperson

- *BUS 360 Establishing a Small Business** **1 Credit**
Designed for those who wish to establish their own business as owner-managers. Development of sound management and modern techniques covering talents needed for success. How to select the type of business to enter, to acquire a franchise, and to choose the location.
3 Class Hours (5 weeks)
- *BUS 361 Operating a Small Business** **1 Credit**
Designed for those who wish to operate their own business or who are presently operating their own business. Development of sound management and modern techniques covering the production of a product or service, marketing of the business, supplier relations, techniques of management, and the safeguarding of the firm's assets.
3 Class Hours (5 weeks)
- *BUS 362 Record Keeping in a Small Business** **1 Credit**
Designed for those interested in small business as owner-managers. An in-depth treatment of fundamentals of the accounting process, evaluating the financial health of the business, regulations and taxes affecting the small business and using the computer in operating the small business.
3 Class Hours (5 weeks)

ANTHROPOLOGY

- ANT 110 Physical Anthropology and Archeology** **3-4 Credits**
Introduction to human evolutionary history and present day variation examining genetics, ecology, fossils and the primate order. Relationships of physical evolution to early cultural developments as revealed by the archeological record. A limited number of students may select an optional laboratory session giving practice in various technical procedures used in physical anthropology and archeology.
3 Class Hours
- ANT 111 Cultural Anthropology** **3 Credits**
Comparison of various Western and non-Western societies and cultures. Anthropological theory, linguistics, problems of modernization of traditional societies.
3 Class Hours
- ANT 299 Independent Study** **1-3 Credits**
An individual student project in anthropology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.
Prerequisite: 3 semester hours in Anthropology

ART

- ART 101 Fine Arts: Introduction to Art** **3 Credits**
Basic art principles and concepts together with their historical development as shown in representative works of painting, sculpture and architecture. Gallery visits.
3 Class Hours

- ART 110, 111 Studio Art** **3, 3 Credits**
Basic drawing skills as a foundation for studio work, including black and white media and color, using a variety of media, and ultimately leading into oils, acrylics and water color painting. Composition, color, sketching from life and nature, emphasizing a creative approach to subject matter.
6 Studio Hours each
Prerequisite: ART 110 Studio Art for ART 111
- ART 120 Sculpture Fundamentals** **3 Credits**
Abstract elements of sculptural form as revealed through analysis of student work and historical examples. Emphasis on developing the student's ability to utilize concepts in practice and to expand his/her understanding of the general function of form as symbolic structure.
6 Studio Hours
- ART 130 Ceramics** **3 Credits**
Study of the basic processes of the design and creation of ceramics, both functional and sculptural. Fundamentals of hand-building, potter's wheel, glazing and firing.
6 Studio Hours
- ART 220 Life Sculpture** **3 Credits**
The principles of abstract form applied to the human body, and the expressive possibilities of the human figure explored. Studies of actual models in oil-base clay later to be cast into plaster or carved in wood or stone.
6 Studio Hours

Independent Study: Art

1-3 Credits

- ART 297 Sculpture**
ART 298 Painting
ART 299 Art History

An individual student project concerned with advanced work in a specific area of art. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.
Prerequisite: 3 semester hours of college level work in Art.

BIOLOGY

- BIO 111 General Biology I** **4 Credits**
Principles of evolution and ecology as unifying themes in biology. Evolutionary processes and ecological adaptations illustrated by plant and animal diversity. The community of cellular life processes. Current environmental problems. The laboratory includes field trips, during which about 40 plant species are observed.
3 Class Hours, 3 Laboratory Hours
- BIO 112 General Biology II** **4 Credits**
Principles of evolution and ecology as unifying themes in biology. The human animal and its systems. Concepts of animal behavior. Classical genetics, current concepts of gene function and human genetics. Organismal growth and development. Current environmental problems. The laboratory includes field trips, during which about 40 local bird species are observed.
3 Class Hours, 3 Laboratory Hours
- BIO 131 Human Biology I** **4 Credits**
Normal structure (gross and microscopic) and function of the skeletal, muscular and nervous systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.
3 Class Hours, 2 Laboratory Hours

BIO 132 Human Biology II**4 Credits**

A continuation of BIO 131 Human Biology I covering the circulatory, respiratory, digestive, urinary, reproductive and endocrine systems. Emphasis on physiology in lectures and on anatomy in laboratory, stressing those aspects which have greatest relevance to the student's curriculum.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** BIO 131 Human Biology I or permission of instructor**BIO 150 Microbiology I****4 Credits**

The biology of the common bacteria and related microorganisms. General microbiology including asepsis, disinfection, sterilization, cultivation, pathogenicity, resistance, identification.

3 Class Hours, 3 Laboratory Hours**BIO 160 Microbiology****3 Credits**

Position of microorganisms in the biological world, as well as their cultivation and identification. Asepsis, disinfection and sterilization. Disease transmission and the human elements in defense. For Medical Office Assistant and Dental Hygiene students.

2 Class Hours, 3 Laboratory Hours**BIO 295 Biology Seminar —
Current Trends in Biology****1 Credit**

Current trends and developments in the biological sciences presented and discussed by students. Each student is expected to present at least one oral report per semester and to take part in the discussions of other reports. Use of recent literature is stressed. Seminar may be taken each semester for a maximum of 2 credits.

1 Class Hour**Prerequisite:** A college general biology course or permission of instructor**CHEMISTRY AND CHEMICAL TECHNOLOGY****CHM 102 Preparatory Chemistry****4 Credits**

Introductory course in chemistry emphasizing problem-solving techniques related to chemical concepts. Atomic structure, stoichiometry, metric units, chemical bonding, chemical nomenclature, solution chemistry.

4 Class Hours***CHM 125 Chemistry****3 Credits**

Fundamental concepts of inorganic chemistry. Composition of substances, kinetic and molecular theories, atomic structure and bonding, solutions and colloids, ions in solution and introduction to organic chemistry. For Fire Protection Technology students.

2 Class Hours, 3 Laboratory Hours**CHM 131 Chemistry****4 Credits**

Fundamental concepts of inorganic chemistry. Stoichiometry, atomic structure, periodicity, chemical bonding, kinetic theory, states of matter, acids and chemical equilibria. For Medical Laboratory Technology students.

3 Class Hours, 3 Laboratory Hours**CHM 132 Chemistry****4 Credits**

A continuation of CHM 131 Chemistry including chemical equilibria, coordination chemistry and an extensive treatment of classical quantitative analysis. For Medical Laboratory Technology students.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 131 Chemistry**CHM 141 General Chemistry****4 Credits**

Chemical principles, applications and laboratory experimentation to evaluate important scientific and technological issues in our complex society. Energy sources; coal, gas, petroleum, solar, geothermal, food. Radioactivity, effects of radiation, nuclear weapons and man's effect on the climate: warming of the earth, the greenhouse effect, atmospheric particles, supersonic transport, weather modifications. For Liberal Arts non-science majors.

3 Class Hours, 3 Laboratory Hours**CHM 142 General Chemistry****4 Credits**

A continuation of CHM 141 General Chemistry. Chemistry of the air, water, and land environment. Chemicals in the internal environment: food and drugs. Basic concepts of organic chemistry, polymers and plastics, natural and synthetic organic medicinal compounds, legislation of food additives, regulation of carcinogens, chemistry of living systems, chemistry in criminal investigations. For Liberal Arts non-science majors.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 141 General Chemistry**CHM 145 Chemistry****4 Credits**

A comprehensive treatment of general chemistry for the science-oriented student emphasizing the quantitative relationships in chemical reactions and the current atomic and bonding theories explaining chemical phenomena. Periodicity, writing, balancing and interpretation of chemical equations, stoichiometric calculations based on equations, solution stoichiometry. Laws governing physical states and changes in state, physical properties of solutions. For Engineering Science and Liberal Arts science majors.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** High School Chemistry or CHM 102 Preparatory Chemistry**CHM 146 Chemistry****4 Credits**

Continuation of CHM 145 Chemistry including chemical thermodynamics, kinetics, acid-base theory, chemical equilibrium, equilibria in aqueous solution and electrochemistry. For Engineering Science and Liberal Arts science majors.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 145 Chemistry**CHM 149 Forensic Science****4 Credits**

Introduction to forensic chemistry, including the examination of firearms, cartridges, explosives, drugs and other common types of evidence. Emphasis on understanding the chemical properties of substances found in crime scene investigation and subsequent laboratory analysis. Photography, chemical microscopy, chemical instrumentation along with classical experiments in the laboratory.

3 Class Hours, 3 Laboratory Hours**CHM 161 Chemistry****4 Credits**

Basic concepts underlying chemical action emphasizing measurement, basic chemical calculations, atomic structure and the periodic law. Chemical bonding, states of matter, solutions, kinetic and molecular theories, chemical equilibrium and energy changes in chemical reactions. Laboratory stresses techniques in chemical manipulations and data collection. For Chemical Technology students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** High School Chemistry or CHM 102 Preparatory Chemistry

CHM 162 Chemistry**5 Credits**

A continuation of CHM 161 Chemistry. Oxidation-reduction and electrochemistry, acids, bases and salts. Solubility product principle and coordination compounds. Laboratory work stresses qualitative and quantitative methods and techniques. For Chemical Technology students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** CHM 161 Chemistry**CHM 190 Forensic Police Chemistry****3 Credits**

Introduction to general chemistry. The physical and chemical properties of substances commonly found at crime scenes. Application of chemical principles to the examination and identification of material evidence. Laboratory analysis of these substances. Emphasis of techniques used in the laboratory and proper handling of materials prior to analysis. Introductory period involving classical laboratory techniques, then experiments using modern instrumentation such as gas chromatography and infrared spectroscopy.

2 Class Hours, 2 Laboratory Hours**CHM 221 Organic Chemistry****3 Credits**

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory covers techniques of separation and purification including gas chromatography, spectroscopy and synthesis. For Medical Laboratory Technology students.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 132 Chemistry**CHM 222 Organic Chemistry****3 Credits**

A continuation of CHM 221 Organic Chemistry including a study of the structure, reactivity and stereochemistry of important biomolecules. Laboratory includes multi-step synthesis as well as selected experiments with biomolecules.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** CHM 221 Organic Chemistry**CHM 224 Instrumental Analysis****4 Credits**

Theory and laboratory instruction in electrochemical and optical methods of analytical chemistry, including potentiometry, polarography, amperometry, coulometry, conductimetry, radiochemistry. Ultraviolet-visible, infrared, atomic absorption and emission spectroscopy. Column, thin-layer and gas chromatography. For Medical Laboratory Technology students.

2 Class Hours, 6 Laboratory Hours**Prerequisite:** CHM 132 Chemistry**CHM 245 Organic Chemistry****5 Credits**

A fundamental treatment of organic chemistry. Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separation, purification and isolation by classical methods as well as modern instrumental techniques. For Liberal Arts science majors and Engineering Science students with departmental approval.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** CHM 146 Chemistry or CHM 162 Chemistry**CHM 246 Organic Chemistry****5 Credits**

A continuation of CHM 245. Also includes such biomolecules as fats, carbohydrates, proteins and nucleic acids. The laboratory emphasizes multistep syntheses and qualitative organic analysis.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** CHM 245 Organic Chemistry**CHM 261 Organic Chemistry****5 Credits**

A systematic study of organic chemistry. Nomenclature, structures, reaction mechanisms, chemical properties, syntheses, effects on man and his environment. Laboratory experiments include separations, identifications, syntheses. For Chemical Technology students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** 1 year of college General Chemistry or CHM 162 Chemistry**CHM 262 Organic Chemistry****5 Credits**

An extension of CHM 261 Organic Chemistry, a systematic study of organic compounds. Spectroscopy, heterocyclic compounds and polymer chemistry. For Chemical Technology students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** CHM 261 Organic Chemistry**CHM 265 Instrumental Methods of Chemical Analysis**

Principles and techniques of modern quantitative analysis including Kjeldahl nitrogen analysis, chelatometry, ion-exchange, non-aqueous titrations, conductimetry, coulometry, electrogravimetry, polarography, amperometry, potentiometry, radioisotope methodology. Statistical evaluation of data obtained by the various analytical methods. For Chemical Technology and Liberal Arts "Chemical Model" students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** 1 full year of college General Chemistry and**MAT 142 Applied Calculus I and PHY 142 Physics****CHM 266 Instrumental Methods of Chemical Analysis****5 Credits**

Principles and techniques of modern instrumental methods of chemical analysis including ultraviolet, visible, infrared, nuclear magnetic resonance, atomic absorption, emission and mass spectroscopy. Column, thin-layer, gel permeation, gas and liquid-liquid chromatography. Chemical microscopy and differential thermal analysis. For Chemical Technology and Liberal Arts "Chemical Model" students.

3 Class Hours, 6 Laboratory Hours**Prerequisite:** 1 full year of College General Chemistry and**MAT 142 Applied Calculus I and PHY 142 Physics****CHM 271 Chemical Processes****5 Credits**

Material and energy balances along with applied chemical and physical principles as they apply to chemical engineering. Emphasis on problem-solving in the classroom and engineering reports in the laboratory.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** 1 full year of General Chemistry and**MAT 142 Applied Calculus I and PHY 142 Physics****CHM 272 Chemical Processes****5 Credits**

Staged operations dealing with phase equilibrium. Graphical, analytical and computer methods are used to solve unit operations problems. The laboratory emphasizes engineering reports.

3 Class Hours, 4 Laboratory Hours**Prerequisite:** CHM 271 Chemical Processes

CHM 290 Forensic Toxicology 3 Credits

Application of the principles of forensic toxicology and the related forensic sciences within the scope of medical-legal investigation. Drug and poison analysis, examination of physical evidence and death investigation. Optional laboratory sessions will provide basic knowledge of forensic analysis utilizing microscopy, gas chromatography, thin layer chromatography and spectroscopy.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CHM 149 Forensic Science or CHM 190 Forensic Police Chemistry or a semester of General Chemistry or permission of instructor

***CHM 291 Organic Chemistry I 3 Credits**
***CHM 292 Organic Chemistry II 3 Credits**

Nomenclature, properties of selected functional groups, mechanisms, stereochemistry, synthetic methods and spectroscopy. The laboratory stresses basic techniques of reactions, separations and isolation by classical methods as well as modern instrumental techniques.

2 Class Hours, 3 Laboratory Hours each

Prerequisites: CHM 146 Chemistry for CHM 291

CHM 291 Organic Chemistry I for CHM 292

***CHM 293 Analytical-Instrumental Chemistry I 3 Credits**

Classical analytical chemistry — sampling, statistics, gravimetric and volumetric analysis. Introduction to electrochemistry.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CHM 146 Chemistry

***CHM 294 Analytical-Instrumental Chemistry II 3 Credits**

Continuation of CHM 293 Analytical-Instrumental Chemistry I.

Additional electrochemistry and electrochemical techniques. Emphasis on spectroscopic and chromatographic methods. Visible, infrared and nuclear magnetic resonance spectroscopy. Gas, liquid, column and thin layer chromatography.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CHM 293 Analytical-Instrumental Chemistry I

CHM 299 Independent Study 2-4 Credits

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Departmental approval

CHILD CARE

Child Care (CDC) courses may not be used to satisfy the Social Science requirement.

The Child Care program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the program Coordinator of Child Care. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

MOST CHILD CARE COURSES (THOSE WITH CDC DESIGNATION) ARE OFFERED ONLY IN THE EVENING. FULL-TIME CHILD CARE STUDENTS MUST PLAN FOR BOTH DAY AND EVENING CLASSES.

***CDC 100 Introduction to Education of Young Children 3 Credits**

An over-all view of nursery education and where it is going. Discussion of various philosophies and methods, programming, scheduling (what should go into scheduling a day for a pre-schooler and when). Focus on social, emotional and physical needs of young children and the importance of the "self concept" for both the child and the adult working with young children. Introduction to the college's Child Care program covering requirements, courses and career information. A required number of observations in pre-schools, nurseries and day care centers in the area, as well as a special laboratory project. Required of Child Care majors.

2 Class Hours, 2 Laboratory Hours

***CDC 115 Music for Young Children 3 Credits**

How to develop the whole child through the use of music. This course will be of a practical application for the teacher. Various techniques and methods will be demonstrated through the use of songs, records, eurhythms, rhythm instruments and creative activities. Class participation will be a vital part of this course. Students will be expected to apply these various methods and activities with young children

3 Class Hours

***CDC 120 Curriculum Development 3 Credits**

A pre-school curriculum for students planning to work in day-care centers and nursery schools. Emphasis on how art, language, math, creative play, science and outdoor play programs are used for the physical, social, emotional and mental development of the young child. Sharing and implementing ideas through special projects and construction and implementation of material related to specified areas. Students will be required to perform certain activities in a nursery school setting or with groups of children.

2 Class Hours, 2 Laboratory Hours

Prerequisite: CDC 100 Introduction to Education of Young Children

***CDC 140 Art for Young Children 3 Credits**

In-depth coverage of art education as it contributes to the pre-school child's emotional, physical and psychological growth. Needs of pre-schoolers in this area and ways to foster creativity and skill acquisition. Materials and methods appropriate for this age. A laboratory experience working with pre-schoolers in art will be required.

2 Class Hours, 2 Laboratory Hours

***CDC 150 Motor Development 3 Credits**

Designed to give the student an understanding of normal motor development and how it relates to cognitive and perceptual development. Students will be exposed to programs and activities in motor development for young children.

3 Class Hours

***CDC 160 Nutrition 3 Credits**

Basics of good nutrition with emphasis on children. Ideas on planning and preparing snacks and meals and teaching good nutrition habits to children. Ideas on fitting nutrition into the nursery education curriculum and tying it to other subjects. Projects for practical application and experience in a nursery school setting.

2 Class Hours, 2 Laboratory Hours

- *CDC 170 Practicum I** **3 Credits**
Designed to meet the needs of both the experienced and the inexperienced students. The inexperienced student is placed in a classroom setting conducive to the learning of desired teacher competencies, working with an experienced supervising teacher. Six hours per week for twelve weeks in this situation. Self-evaluation as well as being evaluated by others.
The experienced student is given some credit for work experience. For him/her, the practicum emphasizes self-evaluation according to classroom competencies. Both experienced and inexperienced students in group seminars with a college representative and meeting for individual consultations. Required of Child Care majors.
Prerequisite: 30 hours of counseled coursework
Taught evenings, field work days
- *CDC 180 Child Health and Safety** **3 Credits**
Designed to help students become aware of techniques for promoting general health care and safety standards at children's centers. Red Cross First Aid and Safety Course included.
3 Class Hours
- *CDC 200 Social Psychology of Education** **3 Credits**
An investigation of the social and psychological factors that affect a child's learning processes. How the interaction of the unique characteristics of teachers, community, family and society contribute to the learning environment of the classroom. How learning outcomes can be efficiently achieved. Desirable conditions for learning. Required of Child Care majors.
2 Class Hours, 2 Laboratory Hours
Prerequisite: PSY 110 General Psychology
- *CDC 210 Special Problems in Children** **3 Credits**
How to understand and help the child with a special problem. Normal adjustment problems, learning disabilities; physical handicaps, retardation and the emotionally disturbed child. Techniques for the classroom teacher and places to get help. Actual student involvement with children who exhibit these problems.
2 Class Hours, 2 Laboratory Hours
Prerequisite: PSY 211 Child Development
- *CDC 220 Trends in Education of Young Children** **3 Credits**
An overview and insight into various philosophies and materials of education for young children, including Montessori, Piaget, open education (comparing English and American schools), affective education, behavior modification. The course aims to develop the competency of the student through practical application.
3 Class Hours
Prerequisite: CDC 100 Introduction to Education of Young Children
- *CDC 230 Working with Parents in Nursery Programs** **3 Credits**
Designed to introduce the need for the parent's involvement in the education of the young child. Benefits for teachers, parents and children, when teachers and parents work closely together. Consideration of feelings of teachers and parents which help or hinder their working together. Various aspects of working with parents, such as home visiting, group parent meetings, newsletters and written communications, parent conferences and the use of volunteers in the classroom. Part of the course on a workshop basis, and students required to develop a special project to earn their third credit.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CDC 100 Introduction to Education of Young Children

- *CDC 250 Language in Early Childhood** **3 Credits**
A developmental study of language growth in young children and its influence on learning, (cognitive abilities, social and behavioral concepts). Contemporary language theories and programs including a diagnostic approach to teaching language, (communication skills, reading readiness and literature appreciation) in the pre-school. The student will be expected to spend a number of hours in a special project requiring observations of individual children and language arts programs.
2 Class Hours, 2 Laboratory Hours
Prerequisite: CDC 100 Introduction to Education of Young Children
- *CDC 290 Practicum II** **6 Credits**
Designed to be flexible depending upon the needs and interests of the student. Project for experienced students based on the development of these needs and interests. Project must be approved. The experienced student to share ideas from his/her areas of strength in seminar situations.
For the inexperienced student, a classroom situation to conduct a self-evaluation of own competencies as a teacher, as well as being evaluated by others. Work with an experienced supervising teacher. The inexperienced student to spend 9 hours per week in a classroom situation for 12 weeks. Required of Child Care majors.
Prerequisite: CDC 170 Practicum I and CDC 200 Social Psychology of Education
Taught evenings, field work days
- CDC 299 Independent Study in Child Care** **1-2-3 Credits**
An individual student project in child care beyond the scope or requirements of the courses offered by the department. Under the direction of a faculty member and approved by the program coordinator and department chairman. No more than 3 credits may be acquired toward the Child Care degree in independent study projects.
1-2-3 Class Hours
Prerequisite: 6 Semester hours in Child Care courses

CIVIL TECHNOLOGY

- CIV 111 Surveying I** **4 Credits**
Plane surveying including distance measurement, note keeping, leveling, angle measurement, care and use of instruments, stadia, record searching, deed descriptions, traversing, coordinates, area computation, map inking and sewer stakeout.
2 Class Hours, 6 Laboratory Hours
Corequisite: MAT 141 College Algebra and Trigonometry
- CIV 112 Surveying II** **2 Credits**
A continuation of CIV 111 Surveying I including mapping, field astronomy, precise leveling, triangulation, electronic measurements and public land surveys.
1 Class Hour, 3 Laboratory Hours
Prerequisite: CIV 111 Surveying I
- CIV 115 Engineering Drawing** **2 Credits**
Fundamentals of Engineering Drawing including care and use of instruments, line-work, lettering, dimensioning, orthographic projection, sections, auxiliary views, detailing and an introduction to architectural drawing.
1 Class Hour, 3 Laboratory Hours

CIV 117 Architectural Drafting**2 Credits**

Fundamentals of architectural drafting including floor plans, elevations, sections, details, schedules, plot plans, plumbing layouts, electrical layouts. Emphasis on residential drawings.

1 Class Hour, 3 Laboratory Hours

Prerequisite: CIV 115 Engineering Drawing

CIV 124 Mechanics (Statics)**3 Credits**

Static force systems and equilibrium. Free body diagrams, trusses, graphic static, spatial force systems, friction, centroids, moments of inertia.

3 Class Hours

Prerequisite: PHY 141 Physics

CIV 155 Surveying*3 Credits**

Plane surveying including distance measurement, note keeping, compass surveying, leveling, angle measurement, care and use of instruments, stadia, traversing, coordinates, area computation, mapping and records.

2 Class Hours, 3 Laboratory Hours

Prerequisites: MAT 139 Algebra and MAT 140 Trigonometry or MAT 141 College Algebra and Trigonometry

CIV 156 Route Surveying*4 Credits**

Horizontal and vertical curves, spirals, sight distances and earthwork. Introduction to computer applications. Laboratory includes problem sessions using the college's computer to solve coordinate geometric problems.

3 Class Hours, 2 Laboratory Hours

Prerequisite: CIV 155 Surveying

CIV 159 Architectural Drafting I*3 Credits**

Development of working drawings for use in residential type construction. Plot plans, floor plans, elevations, details, mechanical and electrical layouts. Lectures to include construction materials, specifications and methods.

2 Class Hours, 3 Laboratory Hours

CIV 160 Architectural Drafting II*3 Credits**

A continuation of CIV 159 Architectural Drafting I. Development of working drawings for two-story and split-level residences.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 159 Architectural Drafting I

CIV 161 Architectural Drafting III*3 Credits**

Development of a set of working drawings for a small two-story commercial building including floor plans, elevations, sections, details, mechanical and electrical layouts, window and door schedules. Term project. (Not offered in 1978-79 academic year).

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 160 Architectural Drafting II

CIV 163 Plain Concrete*2 Credits**

Cements, aggregates and plain concrete, including the testing of cements and aggregates, the design mixing, testing, placing, curing control and inspection of plain concrete. ASTM and AASHTO standards. (Not offered in 1978-79 academic year).

2 Class Hours

CIV 212 Route Surveying and Photogrammetry**4 Credits**

Route Surveying: Simple and compound curves, vertical curves, spirals and earthwork. Selected topics in route selection, field technique and route design. Computer applications (COGO).

Photogrammetry: Basic optics, geometry of aerial photography, flight planning, ground control, stereoscopy and parallax, stereo pairs, mosaics and plotting instruments.

3 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 111 Surveying I

CIV 215 Strength of Materials**4 Credits**

Concepts of stress and strain. Simple stress, strain, torsion, shear and moment, stresses in beams, beam deflections, statically indeterminate beams, composite members, columns, combined stresses.

4 Class Hours

Prerequisite: CIV 124 Mechanics (Statics)

CIV 217 Materials Testing**3 Credits**

Composition, properties and testing of construction materials. Major emphasis on plain concrete. Aggregates, cements, admixtures, design and proportioning of concrete mixes, curing and inspection. Bituminous materials and ferrous metals, load and deformation measurements, behavior of materials under load, strain gauges.

2 Class Hours, 3 Laboratory Hours

Corequisite: CIV 215 Strength of Materials

CIV 224 Reinforced Concrete Design**3 Credits**

Fundamental theory and principles for the design of reinforced concrete. Design, analysis and detailing of rectangular beams. T-beams, beams reinforced for compression, columns and footings. Emphasis on ultimate strength design methods. Theory of prestressed concrete. An integrated design and detailing project.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 215 Strength of Materials

CIV 226 Structural Steel Design**3 Credits**

Fundamental theory and principles necessary for design of simple steel structures. Design, investigation and detailing of beams, columns, tension and compression members and their connections. Composite beams. An integrated design and detailing project.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 215 Strength of Materials

CIV 228 Estimating and Construction Planning*3 Credits**

A systematic approach to estimating building project costs combined with a study of construction management and the critical path method of scheduling.

2 Class Hours, 2 Laboratory Hours

CIV 231 Estimating and Construction Planning**3 Credits**

A systematic approach to estimating building project costs combined with a study of the critical path method of scheduling

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 238 Architectural Design and Building Materials

CIV 235 Hydraulics**4 Credits**

Hydraulics including properties of fluids, hydrostatics, fluid motion in or through orifices, nozzles, pipes, weirs, open channels, hydraulic machinery, pipe branches and networks.

3 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 124 Mechanics (Statics)

CIV 236 Construction Management 3 Credits

Principles of construction management, specification writing, with emphasis on planning, building, scheduling and controlling a project.

3 Class Hours

Prerequisite: CIV 238 Architectural Design and Building Materials

CIV 238 Architectural Design and Building Materials 3 Credits

Design and detailing of commercial buildings including site considerations, space requirements, layout planning, building materials, manufacturing processes, construction methods, working drawings. Emphasis on individual creativity. Semester project.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 117 Architectural Drafting I

CIV 240 Soil Mechanics 3 Credits

Soil origin and nature, soil density, test borings, gradation compaction, soil water, frost in soil, classification, stress, retaining walls, shear strength, bearing capacity, piles. The laboratory covers ASTM and AASHTO specifications used in classifying and predicting behavior of soils.

2 Class Hours, 3 Laboratory Hours

Prerequisite: CIV 215 Strength of Materials

CIV 244 Environmental Sanitation 3 Credits

Population studies, water supply, transportation, distribution and treatment. Sewage collection and treatment, unit operations. Communicable diseases, biological and chemical aspects of water and sewage. Refuse sanitation, air pollution, industrial wastes, radioactivity.

3 Class Hours

Prerequisite: CIV 235 Hydraulics

***CIV 251 Elementary Structural Analysis I 3 Credits**

Introduction of structural analysis. Reactions, shear and moment diagrams, truss analysis, graphic statics, influence lines, moving loads, approximate analysis of indeterminate structures, deflections. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials

***CIV 252 Elementary Structural Analysis II 3 Credits**

Continuation of CIV 251 Elementary Structural Analysis I. Deflections, indeterminate beams and frames, Castigliano's theorems, three moment equations, slope deflections, moment distribution, column analogy and plastic analysis. Computer applications. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: CIV 251 Elementary Structural Analysis I

***CIV 255 Reinforced Concrete Design 3 Credits**

Fundamental behavior of reinforced concrete. Design and analyses of rectangular beams, T-beams, beams reinforced for compression, columns and footings. Major emphasis on ultimate strength design methods. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials

***CIV 257 Structural Steel Design 3 Credits**

Fundamental theory and principles necessary for design of simple steel structures. Design and analysis of beams, columns, tension members, compression members and their connections. Composite beams, framing systems, loads and forces.

3 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials

***CIV 260 Environmental Sanitation 4 Credits**

Communicable diseases, water requirements and waste volumes, water supplies, transportation and distribution of water, chemical and biological aspects. Water treatment, waste water treatment including biological and physical treatments. Emphasis on municipal systems. Individual systems. (Not offered in 1978-79 academic year).

4 Class Hours

***CIV 262 Soil Mechanics 4 Credits**

Origin and nature of soil, soil physics, sampling soil water, flow nets and seepage forces, classification, frost action, stability, retaining walls, piles, and underground conduits. (Not offered in 1978-79 academic year).

4 Class Hours

Prerequisite: MET 235 or CIV 215 Strength of Materials or permission of instructor

***CIV 266 Hydraulics 3 Credits**

A basic course in theory and practical applications of hydraulics. Properties of fluids, measurements, hydrostatics, dynamic problems of both pipe and open channel flow. Application and limitations of some of the design aids in common use. (Not offered in 1978-79 academic year).

3 Class Hours

***CIV 268 Engineering Economics 2 Credits**

Use of compound interest in financing and in determining engineering cost comparisons. Introduction to depreciation methods. Illustrative cases and problems (personal and engineering) including New York State Professional Engineering Examination problems.

2 Class Hours

Prerequisite: MAT 139 Algebra or equivalent

***CIV 270 Highway Design 3 Credits**

Phases of highway design in sequence from initiation to final design. Classification of highways, criteria and controls for both horizontal and vertical alignment, typical section, cost estimate, and other features associated with design. A broad review of the scope and content of final plans, specifications and engineers estimate. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: CIV 155 Surveying and CIV 156 Route Surveying or permission of instructor

COMPUTER CENTER COURSES

The CST courses are designed to acquaint students with the computer and its capabilities and to provide opportunities for "hands-on" experience.

Because many college programs and industries depend on the computer to process data rapidly, both transfer-minded students and those preparing for immediate employment after graduation are introduced to the capabilities of the computer.

The College has a large computer system capable of supporting both the College's administrative and academic computing concurrently. The batch computing facilities and 30 time-sharing terminals are available to support the academic pursuits of all students.

CST 110 Introduction to Data Processing 3 Credits

Historical development and current influences exerted on our society by the computer. Basic computer concepts including data entry, hardware and software components that comprise a computer system. Introduction to a computer programming language, with emphasis on logical problem definition and documentation using a time sharing system.
3 Class Hours

***CST 112 Computer Logic 3 Credits**

Comprehensive coverage of computer arithmetic and fundamentals of formal logic. Various number systems used in computer work and techniques for simplifying logic problems. Working basis for understanding and using the computer logically.
3 Class Hours

Prerequisite: CST 110 Introduction to Data Processing or instructor's permission

***CST 116 RPG 3 Credits**

Fundamentals of RPG (Report Program Generator) programming language. Beginning language for small business installations, especially those converting manual or unit record systems to computer. Explanation of specification sheets, internal logic, branching and table look-up operations.
2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 118 Computer Programming — COBOL 3 Credits

Fundamentals of ANSI COBOL applied to solutions of commercially oriented problems. A number of problems assigned for execution on the computer.
2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 120 Computer Programming — FORTRAN (Business) 3 Credits

Programming solutions to business problems utilizing the FORTRAN IV language. Emphasis on documentation procedures, techniques of programming and error analysis, simulation of business data processing in a laboratory environment.
2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

CST 122 Computer Programming — FORTRAN (Technology) 3 Credits

Introduction to problem solving techniques using FORTRAN including development of an algorithm, flow charting, program writing, debugging, storage and execution, input and output, loop techniques, array manipulation, file control and control of on-line equipment, terminal operations. Applications taken from student's area of study.
2 Class Hours, 2 Laboratory Hours

CST 124 Computer Programming for Engineers 3 Credits

FORTRAN IV programming, block diagramming, numbering and coding systems. Use of graphic plotter, derivation and application of empirical equation analysis, application of matrix algebra, application of simulated time and iteration procedures.
2 Class Hours, 2 Laboratory Hours

***CST 126 Assembly Programming — BAL 3 Credits**

Fundamentals of assembly level programming using BAL. Emphasis on the use of assembly language in solving a number of programming problems.
2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 110 Introduction to Data Processing

***CST 130 PL/1 3 Credits**

Introduction to PL/1, a general purpose language capable of conveniently handling both scientific and business problems. Basic program elements, nesting, looping, string techniques, arrays and structures, procedures, input/output and formatting.
2 Class Hours, 2 Laboratory Hours

Prerequisite: One programming language or instructor's permission

***CST 200 Systems Analysis 3 Credits**

Principles of systems analysis, problem solving and implementation of computer systems including the importance of standards, procedures, security and documentation. Each student to complete a programming project utilizing his/her knowledge from this and other Computer Studies courses. A team case study approach and guest speeches provide the format of work sessions.
2 Class Hours, 2 Laboratory Hours

Prerequisite: One programming language or instructor's permission

***CST 205 Advanced FORTRAN with Graphics 3 Credits**

A further study of the proper way to write FORTRAN programs. Use of logical structures to define complicated systems, use of subroutines, simulation programming, file structures, queues, searching, sorting. Emphasis on use of school's plotter and graphics terminals. Class project involving graphics, statistics.
2 Class Hours, 2 Laboratory Hours

Prerequisite: CST 120 or CST 122 Computer Programming — FORTRAN or CST 124 Computer Programming for Engineers

***CST 217 Advanced RPG II 3 Credits**

Multiple content breaks, processing within limits, exception output, arrays, tables and sorts. Special emphasis on sequential, indexed and direct disk file techniques. Laboratory exercises business oriented and run by students in a hands-on environment. Techniques taught are applicable to an actual business environment.
3 Class Hours

Prerequisites: CST 110 Introduction to Data Processing and CST 116 RPG or permission of instructor

CRIMINAL JUSTICE

Criminal Justice (CRJ) courses may not be used to satisfy the Social Science requirement.

The Criminal Justice program was developed with great flexibility in course selection and can be taken on a part-time basis by those individuals currently employed in the field. Those students who wish to pursue it on a full-time basis should contact the Program Coordinator of Criminal Justice through the Liberal Arts Division. Very close planning and advisement will be necessary to pursue this program to its completion in two years.

CRIMINAL JUSTICE COURSES ARE TAUGHT IN THE EVENING ONLY

***CRJ 100 Survey of Law Enforcement 3 Credits**

History, development and philosophy of law enforcement in a democratic society. Introduction to agencies involved in the administration of criminal justice. Career orientation.
3 Class Hours

- *CRJ 110 Police Administration 3 Credits**
Principles of police management as they relate to organization, functions and activities. Development of policy. Public relations. Professionalism.
3 Class Hours
- *CRJ 120 Criminal Procedure and Constitutional Law 3 Credits**
A review of the steps taken under New York State law to dispose of criminal matters from arrest to appeal, including concepts of probation and parole.
3 Class Hours
- *CRJ 200 Administration of Justice 3 Credits**
An examination of the mechanism under which justice is dispensed under the democratic system. Emphasis on the organization of courts from the federal to the local level.
3 Class Hours
- *CRJ 210 Penal Law 3 Credits**
A detailed study of criminal liability and elements of substantive offenses. Defenses to crime and authorized sentences for crime. Based on the Penal Law of New York State.
3 Class Hours
- *CRJ 220 Evidence for Law Enforcement 3 Credits**
A comprehensive analysis of the rules of evidence as they apply in criminal cases. Emphasis on problems encountered by law-enforcement officers in such areas as illegally obtained evidence and wire-tapping.
3 Class Hours
- *CRJ 230 Criminal Investigation 3 Credits**
Basic principles of criminal investigation as they relate to the collection, preservation, identification and examination of physical evidence. Techniques of locating and interviewing witnesses.
3 Class Hours
Prerequisite: 3 years law enforcement experience or CRJ 210 Penal Law or CRJ 220 Evidence for Law Enforcement
- *CRJ 240 Introduction to Corrections 3 Credits**
Corrections are enshrouded with myths and hampered by public attitudes. Student involvement in the correctional system through discussions, reading, field trips, movies and other experiences. The relationship of law enforcement, corrections, family conditions and correctional treatment methods.
3 Class Hours
Prerequisite: SOC 110 Introduction to Sociology or SOC 111 Social Problems
- *CRJ 250 Juvenile Delinquency 3 Credits**
Causes and treatment of the juvenile delinquent, his apprehension and commitment. Various methods of caring for delinquent, including the present day, psychiatric approach. Problems related to juvenile justice abuses. Case studies, visual aids, guest lecturers and visits to juvenile institutions supplement the lecture and project approach.
3 Class Hours
Prerequisite: SOC 110 Introduction to Sociology or SOC 111 Social Problems
- *CRJ 260 Introduction to Security 3 Credits**
Organization and management of the security function in industry, business, government and institutions. The protection of personnel, facilities and other assets, as well as administrative, legal and technical problems of loss prevention and control.
3 Class Hours

DENTAL HYGIENE

- DEN 101 Dental Hygiene I 4 Credits**
Contemporary practice of dental hygiene and factors affecting such practice. Principles of instrumentation, root planing, polishing in pre-clinical environment. Clinical experience in some of the basic techniques of dental hygiene care, such as oral prophylaxis, care of equipment and dental first aid.
2 Class Hours, 6 Laboratory Hours
- DEN 102 Dental Hygiene II 4 Credits**
Continuation of DEN 101 Dental Hygiene I. Clinical experience in the theory, techniques, procedures of dental hygiene care
2 Class Hours, 8 Laboratory Hours
Prerequisites: DEN 101 Dental Hygiene I and BIO 131 Human Biology I and DEN 103 Oral Anatomy and Physiology
- DEN 103 Oral Anatomy and Physiology 4 Credits**
Normal structure and function of the oral cavity (microscopic and gross). Laboratory work provides experience with traditional approaches to oral anatomy and physiology.
2 Class Hours, 4 Laboratory Hours
- DEN 105 Nutrition 3 Credits**
Nutrients necessary for healthy functioning of human beings in various stages of the life cycle — functions, sources, conditions resulting from excessive and inadequate intake of each nutrient. Composition of foods from various plant and animal sources and their use in planning an adequate and balanced diet.
3 Class Hours
Prerequisite: DEN 103 Oral Anatomy and Physiology
- DEN 106 Clinical Dental Radiography 2 Credits**
Nature and behavior of radiation, biological benefits and hazards, maintenance of radiation hygiene, use and care of the X-ray machine. Intraoral and extraoral dental radiographic techniques performed on manikins and patients, film processing and mounting, radiographic interpretation.
1 Class Hour, 2 Laboratory Hours
Prerequisites: DEN 101 Dental Hygiene I and DEN 103 Oral Anatomy and Physiology and BIO 131 Human Biology I
- DEN 201 Dental Hygiene III 7 Credits**
Continuation of DEN 102 Dental Hygiene II. Integration of theory with clinical experience in various oral hygiene preventive procedures, selected expanded duties and essential business aspects of a dental office.
4 Class Hours, 12 Laboratory Hours
Prerequisites: DEN 102 Dental Hygiene II, Den 104 Nutrition, DEN 106 Clinical Dental Radiography, BIO 160 Microbiology
- DEN 202 Dental Hygiene IV 6 Credits**
Continuation of DEN 201 Dental Hygiene III. Clinical experience in all phases of dental hygiene care. Emphasis on planning and execution of the total treatment plan concept.
2 Class Hours, 16 Laboratory Hours
Prerequisites: DEN 201 Dental Hygiene III, DEN 204 General and Oral Pathology and DEN 205 Periodontology

DEN 204 General and Oral Pathology**3 Credits**

Broad picture of the disease process through the study of common general diseases, their causes, results and treatment. Emphasis on the principles of inflammation, healing and repair, oral diseases, their causes, recognition and treatment.

2 Class Hours

Prerequisites: DEN 102 Dental Hygiene II, DEN 104 Nutrition, BIO 160 Microbiology and BIO 132 Human Biology II

DEN 205 Periodontology**2 Credits**

Pathology of the periodontium. Emphasis on recognition and treatment of the periodontal patient within the scope of the dental hygienist.

2 Class Hours

Prerequisites: DEN 102 Dental Hygiene II, DEN 103 Oral Anatomy and Physiology, DEN 106 Clinical Dental Radiography, BIO 132 Human Biology II and BIO 160 Microbiology

DEN 206 Dental Pharmacology**2 Credits**

Pharmacology as it affects the clinical practice of dental hygiene and dentistry. Drugs commonly used in dentistry and correct methods for their use. Emphasis on pharmacological aspects of anesthesia.

2 Class Hours

Prerequisites: BIO 132 Human Biology II and BIO 160 Microbiology

DEN 210 Dental Materials**3 Credits**

Composition, chemical and physical properties and use of materials used in the dental laboratory and operatory. Laboratory sessions will provide experience in performing common dental laboratory procedures and background for clinical application of expanded functions.

2 Class Hours, 2 Laboratory Hours

Prerequisite: DEN 201 Dental Hygiene III

DEN 213 Public Health**3 Credits**

Principal responsibilities and functions of public health. Tools for measuring a population's needs and demands and how they are met. Community public and dental health agencies and programs. Research relating to dental diseases. Roles and opportunities for dental hygiene in public health. A special project, on-campus or off, must be completed.

3 Class Hours**DEN 214 Dental Specialties****2 Credits**

Integration, comparison and study of all the special fields of dentistry including endodontics, periodontics, oral surgery, public health, prostodontics, pedodontics and orthodontics.

2 Class Hours

Prerequisite: DEN 201 Dental Hygiene III

DIETETIC ASSISTANT***DIA 101 Nutrition****3 Credits**

The social, cultural, psychological and physiological functions of food. Nutrition care throughout the life cycle. Special consideration given to modifications of the basic diet to meet the needs of the resident in health care facilities. Techniques of interviewing and medical ethics.

2 Class Hours, 4 Directed Practice***DIA 102 Institution Food Preparation****3 Credits**

Principles of food preparation, standardization of recipes, menu structure and planning. Serving, merchandising and promotion of food items. Various food preparation equipment and techniques. Sanitary food handling and holding practices emphasized.

2 Class Hours, 4 Directed Practice***DIA 201 Food Management Systems****3 Credits**

An introduction to the health field and its inter-relationships. The concept of management including the principles of organizing, evaluation, and the decision making process. Control through specification, purchasing, inventory and cost analysis. Equipment, housekeeping, sanitation and safety practices.

2 Class Hours, 4 Directed Practice***DIA 202 Personnel Management****3 Credits**

Leadership and supervisory techniques. Implications of authority and responsibilities. Understanding and communicating with workers and co-workers. Employee recruitment, training and evaluation. Morale and labor relations. Analysis of duties and work simplification performance and motivation.

2 Class Hours, 4 Directed Practice**ECONOMICS****ECO 101 Consumer Economics****3 Credits**

Institutions and forces directly affecting the consumer: consumer income and expenditure patterns, personal finance, credit and tax problems. Personal investment alternatives. Impact of the consumer movement on the individual and society.

3 Class Hours**ECO 104 Labor Economics and American Industry****3 Credits**

Interaction between business, labor and government. Analysis of the causes of unemployment and income inequality. Connection between productivity, wages, prices and employment and application of anti-trust and labor laws to firms and unions.

3 Class Hours**ECO 107 Health Economics and Law****3 Credits**

Economic aspects of health care in America. Demand for medical services, factors which influence its cost, supply and adequate delivery. Alternate ways of solving problems posed. The role of government, social and economic policy in the health care field. Emphasis on the application of micro-economics to health care issues. Medical law as it affects those in medically related fields. Students who have taken ECO 110 Introduction to Micro-Economics must have the permission of the instructor to enroll in this course.

3 Class Hours

ECO 110 Introduction to Micro-Economics**3 Credits**

Supply, demand and the market system as they relate to contemporary economic problems including poverty, energy, the environment and urban decay. The allocation of resources under conditions of competition and various degrees of monopoly. Rationale behind anti-trust laws and other governmental attempts to control monopoly power and promote economic well-being. Comparative economic systems.

3 Class Hours**ECO 111 Introduction to Macro-Economics****3 Credits**

Causes of unemployment and inflation and the government's efforts to control them. Problems of economic growth as they relate to our economy and to other countries, developed and underdeveloped. International trade and finance problems.

3 Class Hours**ECO 120 American Economic History
(Same course as HIS 171)****3 Credits**

A topical approach to the economic impetus behind the growth and development of the United States. Colonial heritage and the market system, population and natural resources, agriculture, transportation, labor, business, the capital market and the influence of government. Understanding today's economic problems by observing how they developed historically. Cannot be used to satisfy **both** the history and social science requirement.

3 Class Hours**ECO 130 Political Economy****3 Credits**

Historical account of the rise of capitalism and its supporting ideology. An appraisal of the successes and failures of capitalism, of its changing form in Europe and America, and of its future. A critique of capitalism, from the "conservative, liberal and radical" perspectives, which examines the major ideas of Friedman, Keynes, Galbraith and Marx, among others.

3 Class Hours**ECO 140 Economics of Urban Problems****3 Credits**

Application of economic analysis to urban problems, an understanding of the economic forces that affect housing, transportation, poverty, crime, land use, the financing of urban services and the urban future.

3 Class Hours**ECO 253 Money and Banking****3 Credits**

An examination of money, credit and financial institutions, emphasizing how the monetary system influences economic activity. Nature and functions of money, the commercial banking system and other financial institutions, the roles of the Federal Reserve System and the Treasury, monetary policy and international money problems.

3 Class Hours**Prerequisite:** ECO 111 Introduction to Macro-Economics**ECO 299 Independent Study****1-3 Credits**

An individual student project in economics which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

Prerequisite: 3 semester hours in economics**ELECTRICAL TECHNOLOGY****EET 111 Electrical Construction Laboratory I****2 Credits**

Basic knowledge about today's electrical equipment. Experience in the installation, fabrication and maintenance of electrical equipment by means of "hands-on" approach. Shop safety and the National Electrical Code. Basic residential and commercial wiring procedures, basic measuring techniques, fundamentals of basic machine operations.

1 Class Hour, 3 Laboratory Hours**EET 112 Electrical Construction Laboratory II****1 Credit**

Advanced wiring methods, fractional horsepower motor and appliance troubleshooting, introduction to residential and commercial lighting and power layout-design.

3 Laboratory Hours**Prerequisite:** EET 111 Electrical Construction Laboratory I**EET 121 Electrical Circuits****5 Credits**

Fundamentals of electrical circuits and application of circuit laws, theorems and measuring techniques to both d-c and a-c. Basic three-phase systems.

4 Class Hours, 3 Laboratory Hours***EET 125 Circuits I****3 Credits**

A correlation of basic concepts of d-c circuits directly related to the electrical and electronic sequence including network theorems.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** MAT 139 Algebra or equivalent**Student may take MAT 139 concurrently with this course*****EET 126 Circuits II****3 Credits**

A continuation of the study of circuits concepts related to single and three-phase alternating current. Resonance, network analysis, power.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** MAT 140 Trigonometry or equivalent and EET 125 Circuits I**Student may take MAT 140 concurrently with this course****EET 130 Engineering Drawing****1 Credit**

Principles of projection. Development of drafting, lettering, and proper line construction. Dimensioning and tolerancing, with an emphasis on shop processes. Use of auxiliary views and sectioning. Preparation of assembly drawings, materials lists, schematic and wiring diagrams.

3 Laboratory Hours**EET 150 Electronics I****5 Credits**

Principles of resonance, inductive coupling, transformers, RL and RC time constants, rectification. Characteristics of electronic devices including diodes, bipolar transistors, field effect transistors, tubes, unijunction transistors, thyristors and special purpose devices. Biasing techniques, load line analysis, rule-of-thumb design, hybrid parameters.

4 Class Hours, 3 Laboratory Hours**Prerequisites:** MAT 141 College Algebra and Trigonometry and EET 121 Electrical Circuits**EET 185 Electricity****3 Credits**

Open to interested students. Practical applications of electrical concepts as applied to basic d-c and a-c circuitry, motors, alternators, energy sources and protection equipment. Laboratory work includes demonstration of concepts by students; operation of common electrical measuring instruments such as multimeters, oscilloscopes, wattmeters and bridges; operation of basic a-c motor starters; use and operation of sensors or transducers to measure physical parameters as force, pressure, temperature.

2 Class Hours, 3 Laboratory Hours**Prerequisites:** PHY 142 Physics (Electricity and Magnetism) and MAT 141 College Algebra and Trigonometry or permission of instructor

EET 186 Electronics**3 Credits**

Open to interested students. Practical applications of electronic concepts as applied to solid state devices, amplifiers, power supplies, oscillators, multivibrators, modulators and basic logic devices. Laboratory work includes demonstration of concepts by students; operation of common electronic instruments such as curve tracer, function generator and counter; use and operation of sensors to measure physical parameters such as motion and displacement.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** EET 185 Electricity or permission of instructor**EET 230 Electronic Design and Fabrication****1 Credit**

Selection, design and construction of an electronic project and preparation of related drawings. Use of various manufacturing processes to fabricate the project. Use of industrial standard drafting practices to properly describe the operations. Chassis layout, printed circuit board design and etch, wiring, soldering, enclosure

3 Laboratory Hours**Prerequisites:** EET 150 Electronics I, EET 130 Engineering Drawing and EET 112 Electrical Construction Laboratory II**EET 241 Electrical Machines and Controls I****4 Credits**

Theory, operation and application of d-c machines, and their magnetic and solid state control. Theory and application of single and polyphase power transformers and rectifiers.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** EET 150 Electronics I**EET 242 Electrical Machines and Controls II****5 Credits**

Generation and use of three-phase power. Theory, operation and application of a-c motors and controls. Principles of open and closed loop systems. Theory, operation, application of industrial equipment used in control systems.

4 Class Hours, 3 Laboratory Hours**Prerequisite:** EET 241 Electrical Machines and Controls I***EET 245 Electrical Machines****4 Credits**

D-c and a-c machine theory, application and control. Single phase and polyphase transformers, solid state rectification.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 126 Circuits II**EET 251 Electronics II****4 Credits**

Basic configurations of active devices, equivalent circuits, performance predictions, frequency response, Bode plots, negative feedback, operational amplifiers, integrated circuits.

3 Class Hours, 3 Laboratory Hours**Prerequisite:** EET 150 Electronics I**EET 252 Electronics III****4 Credits**

Passive and active waveshaping, non-sinusoidal oscillators, sinusoidal oscillators, active filters, large signal amplifiers, regulated power supplies, elements of communications systems

3 Class Hours, 3 Laboratory Hours**Prerequisite:** EET 251 Electronics II***EET 255 Electronics I****4 Credits**

Solid state devices with vacuum tubes and gas devices as supplement. Diodes (Ge, Si, vacuum gas), rectifier circuits (half/full wave), trigger diode, tunnel diode, LED and displays, unijunction transistor, SCR and Triac, bipolar transistor, basic bipolar biasing with rules of thumb, 575 curve tracer (characteristic curves), load line analysis, field effect transistors, triode curves, and h-parameter introduction (575). Laboratory emphasizes proper selection and use of test instruments.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 126 Circuits II***EET 256 Electronics II****4 Credits**

Small signal amplifiers — rule-of-thumb design, basic transistor, voltage divider bias, feedback bias. Darlington, differential pair, direct coupled, d-c/a-c analysis, Q-point prediction, h-parameter equivalent circuit use, prediction of voltage, current and power gain by h-parameters and load line, measurements of input and output impedance. Vacuum triode equivalent and predictions.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 255 Electronics I***EET 257 Electronics III****4 Credits**

Special amplifiers, oscillators and large signal amplifiers — differential amplifier, operational amplifier (characteristics, summer, integrator, differentiator, difference amplifier, active filters), sinusoidal oscillators, multivibrators (astable, bistable, monostable), Schmitt trigger, diode clippers and clampers, RC hi/lo pass circuits, large signal amplifiers (Class A/RC, Class A transformer coupled, Class AB push-pull, Class B, C).

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 256 Electronics II***EET 258 Electronics IV****4 Credits**

Electronic systems design. Power supplies — regulated (zener/transistor), operational amplifier regulators, logic design — logic gates, Boolean expressions, DeMorgan's theorem, digital black box design and simplification, TTL circuit design, flip-flop counter, NAND/NOR gate implementation, RTL circuitry (single shot, astable multivibrator) and mapping. Fundamentals of communication circuits.

3 Class Hours, 2 Laboratory Hours**Prerequisite:** EET 257 Electronics III**EET 261 Network Analysis****3 Credits**

Analysis of complex electrical and electronic networks by the application of Kirchhoff's Laws. Thevenin's and Norton's theorems, superposition theorem, loop and nodal analysis, and transfer function techniques. Use of Laplace transform analysis and matrix methods for the solution of linear equations. The computer is used as an analytical tool where feasible.

3 Class Hours**Prerequisite:** EET 150 Electronics I**EET 267 Digital Electronics and Microprocessors****4 Credits**

Use of electronic circuitry to solve mathematical problems. Digital computer hardware and number systems. Building blocks, sub-system and system operations. Construction and use of monolithic integrated circuits including applications and limitations of available families. Periodical exercises and demonstrations. Use and programming of microcomputers.

3 Class Hours, 2 Laboratory Hours**Prerequisites:** EET 150 Electronics I and**CST 122 Scientific Computer Programming — FORTRAN**

EET 299 Independent Study**2-4 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Departmental Approval

ENGINEERING**EGR 110 Introduction to Technologies****1/2 Credit**

Introduction to the college and its policies, placement, transfer and study skills. Use of scientific calculators. For engineering technology freshmen.

1 Class Hour

EGR 130 Professional Engineers Review Course*4 Credits**

For those qualified who plan to take the New York State Licensing Examination. New requirements for the National Examination. Physics, statics, dynamics, mechanics of materials, electrical theory, economic analysis, mathematics, fluid mechanics, thermodynamics, systems analysis, computer science. Chemical, civil, electrical and mechanical engineering problems. This course can also serve as a guide for self-study for any engineer who wishes to review the broad subject areas in engineering. This is a 30-week course.

2 1/2 Laboratory Hours

EGR 271 Mechanics**4 Credits**

Through vector calculus, development of concepts of forces, moments, couples, vectors in curvilinear coordinate systems. Particle motion, particle dynamics, harmonic forces, force fields, the two-body problem. Relative motion, dynamics of plane systems, impulse-momentum theorems and energy theorems for the rigid body.

4 Class Hours

Prerequisite: PHY 172 Physics and 1 year of Calculus

EGR 274 Electrical and Electronic Circuits**4 Credits**

Units, Coulomb's Law, Ohm's Law, Faraday's Law, Kirchhoff's Law, Ampere's Law, energy and power. Resistance, inductance and capacitance parameters. Series and parallel circuits, superposition theorem, network analysis by mesh currents, nodal techniques, Thevenin's Theorem, Norton's Theorem, network reduction. The Laplace transform for solving step response, pulse response, forced response, natural response and complete response. A-c circuits, phasors, impedances, resonance, balanced three-phase circuits. Fourier Series. Transistor and tube parameters, linear equivalent circuits, biasing methods. Single, double and triple amplifier response in terms of gain, bandpass. Coupling techniques, integrated circuits, modulation, logic circuits.

4 Class Hours

Prerequisite: PHY 271 Physics and 1 year of Calculus

EGR 277 Engineering Science Laboratory I**2 Credits**

Experimentation in mechanics, thermodynamics, electricity and magnetism, sound and light. Some of the experiments may include independent projects.

1 Class Hour, 3 Laboratory Hours

Prerequisite: PHY 172 Physics

Corequisite: PHY 271 Physics (Electricity and Magnetism)

EGR 278 Engineering Science Laboratory II**2 Credits**

Experimentation in electrical circuits and atomic and nuclear physics. Some of the experiments may include independent projects.

1 Class Hour, 3 Laboratory Hours

Prerequisites: PHY 271 Physics (Electricity and Magnetism) and EGR 277

Engineering Science Laboratory I

Corequisites: PHY 272 Physics (Modern) and EGR 274 Electrical

EGR 299 Independent Project**2-4 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Departmental Approval

ENGLISH

After completing a writing sample, students may be directed by the English Department to enroll in ENG 100 Basic Language Skills, a special writing center course. Students generally begin a composition sequence with ENG 110 Written Expression I.

ENG 100 Basic Language Skills**3 Credits**

Writing workshops designed to improve a student's mastery of composition skill, including patterns of sentence structure and the recognition and correction of common errors in grammar and usage.

Minimum 3 Class Hours

The following courses are specially designed for non-native speakers and are parallel to the usual composition sequence of ENG 110 and ENG 120 (or ENG 150).

ENG 105 English as a Second Language I**3 Credits**

A study of the English language for non-native speakers with some knowledge of English. Language workshops to develop listening, speaking, reading and writing skills at the intermediate level. Emphasis on grammar, syntax, vocabulary.

3 Class Hours

ENG 106 English as a Second Language II**3 Credits**

Advanced study of the English language for non-native speakers. Emphasis on the development of compositional skills. Writing workshops for intensive practice in composition.

3 Class Hours

Prerequisite: ENG 105 English or permission of the instructor

ENG 110 Written Expression I**3 Credits**

Study and practice in the composition of ideas and information. Sentence and paragraph development, unity, coherence, style. Nature of language, including investigation of various aspects of communication to stimulate critical thinking.

3 Class Hours

ENG 120 Written Expression II**3 Credits**

Further study and practice in critical and evaluative writing based upon analysis of major types of imaginative literature. Familiarization and practice with research procedures.

3 Class Hours**Prerequisite:** ENG 110 Written Expression I or permission of the instructor**ENG 150 Technical Writing****3 Credits**

Principles and practice of writing to be eventually required of students in technology programs as part of their professional duties. Emphasis on analysis and preparation of reports, articles and technical correspondence.

3 Class Hours**Prerequisite:** ENG 100, ENG 106, ENG 110 or permission of instructor**ENG 160 Expository Writing****3 Credits**

An intensive course in expository, persuasive and critical writing for students who have already mastered the basic skills of written expression. Emphasis on critical reading of professional essayists and articles.

3 Class Hours**Prerequisite:** ENG 120 Written Expression II**ENG 165 Creative Writing****4 Credits**

Designed to provide students interested in imaginative writing with the opportunity to investigate concepts and to practice techniques implicit in prose, poetry and drama. Class discussion, workshops and personal conferences with the instructor. The class will evaluate and arrange material for a campus-wide literary magazine.

3 Class Hours, 2 Laboratory Hours**ENG 200 Media and Culture****3 Credits**

A critical examination of the mechanisms and influences of radio, television and film media on the individual and on society. Exposure to culturally important media works and to some of the important commentators on these works. (Liberal Arts students may not use this course to fulfill composition or literature requirements.)

3 Class Hours**ENG 299 Independent Study: English****3 Credits**

An individual student project concerned with advanced work in a specific area of language or literature. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: One semester of college level work**FIRE PROTECTION TECHNOLOGY*****FRS 101 Fire Prevention and Protection****3 Credits**

Methods, policies and procedures relative to establishing and operating appropriate fire prevention and protection programs.

3 Class Hours***FRS 103 Fire Fighting Tactics and Strategy****3 Credits**

Focus on pre-planning and the development of fire fighting tactics appropriate for a wide variety of hazards. Review of basic information and some local conditions. The case study method is used to develop plans and tactics relating to the students' own departments.

3 Class Hours***FRS 105 Arson Investigation****3 Credits**

Fire investigations and arson. Responsibilities of the arson investigator, tools of the investigator, photography, electronic devices, laws pertaining to arson, motives and tools of the arsonist, courtroom procedures. A field experience will be included.

3 Class Hours***FRS 108 Building Construction for Fire Science****3 Credits**

Fire fighters are confronted with many unknown factors at the fire ground. Among these is the unknown structural stability of the buildings they must enter. Basic principles of building construction and design with emphasis focused on fire protection concerns. Building materials included.

3 Class Hours***FRS 200 Hazardous Materials****3 Credits**

Chemicals and chemical processes most closely involved in fire prevention and fire fighting. Use, storage, transportation and disposal of hazardous materials with emphasis on flammable liquids, flammable solids, oxidizing materials, corrosive liquids, compressed gases.

3 Class Hours**Prerequisite:** Chemistry***FRS 201 Fire Service Hydraulics****3 Credits**

Application of the laws of mathematics and physics to properties of fluid states, force pressure and flow velocities. Emphasis in applying principles of hydraulics to fire-fighting problems.

3 Class Hours**Prerequisite:** MAT 139 Algebra***FRS 205 Fire Department Administration****3 Credits**

Organization of fire departments with emphasis on personnel management, distribution of equipment, maintenance of records, communications, data collection and community relations. ISO Grading Schedule.

3 Class Hours**FRENCH****FRE 101, 102 Beginning French****4, 4 Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each**Prerequisite:** FRE 101 Beginning French for FRE 102**FRE 201 Intermediate French I****3 Credits**

Intensive review of grammar and syntax and oral practice in classroom and audio-lingual laboratory. Reading and discussion of works selected by the instructor.

3 Class Hours, 1 Laboratory Hour**Prerequisite:** FRE 102 Beginning French**FRE 202 Intermediate French II****3 Credits**

Reading of literary works of recognized authors. Continuation of grammar, syntax and oral practices in classroom and audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour**Prerequisite:** FRE 201 Intermediate French I

FRE 203 Masterpieces of French Prose and Poetry I **3 Credits**

The Middle Ages through the Age of Reason. Readings, lectures and discussions of representative works. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: FRE 202 Intermediate French II

FRE 204 Masterpieces of French Prose and Poetry II **3 Credits**

The Age of Romanticism to contemporary times. Readings, lectures and discussions of representative works. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: FRE 203 Masterpiece of French Prose and Poetry I

FRE 205 The Art of French Conversation and Composition **3 Credits**

To develop the student's perception and appreciation of spoken and written French to prepare him or her for further study of the French language, literature and culture. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: FRE 201 and FRE 202 Intermediate French or equivalent

FRE 299 Independent Study: French **1-3 Credits**

An individual student project concerned with advanced work in a specific area of French. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in French

GEOGRAPHY

GEO 110 Physical Geography **3 Credits**

Interrelationships of global systems of climate, vegetation, soils, landform development and their significance to humans. The impact of human presence upon natural systems. (Not offered in 1978-79 academic year).

3 Class Hours

GERMAN

GER 101, 102 Beginning German **4,4 Credits**

Basic principles of grammar and syntax. Emphasis on oral practice in classroom. Written homework assignments, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each

Prerequisite: GER 101 Beginning German for GER 102

GER 201 German Conversation and Composition **3 Credits**

Emphasis on the four language skills — reading, writing, speaking, listening — especially on speaking and writing. Intensive discussion of style, grammar and the contemporary idiom to enhance the student's ability to express himself in German. (Not offered in 1978-79 academic year).

3 Class Hours, 1 Laboratory Hour

Prerequisite: GER 102 Beginning German

GER 299 Independent Study: German **1-3 Credits**

An individual student project concerned with advanced work in a specific area of German. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in German

HISTORY

HIS 100 The Rise of the West **3 Credits**

Core course required of all Liberal Arts students and a prerequisite for all other HIS 100 level courses.

Introduction to both the study of history and the evolution of modern society, including its basic ideas, values and institutions, through an examination of Western Civilization. The Age of Transition — the Renaissance, the Reformation, the Scientific Revolution, and the Enlightenment. The Industrial Transformation, appearance of modern constitutional and authoritarian government, major socio-political ideologies — liberalism, socialism, communism, nationalism, imperialism, fascism, totalitarianism. The intellectual crisis of the 20th Century, World Wars I and II

3 Class Hours

CIVILIZATION SURVEYS (HIS 100-161)

Liberal Arts students may select any one of the following courses in order to satisfy the remainder of the history requirement.

HIS 110 Classical and Medieval History **3 Credits**

Development of the Western tradition from the dawn of history through the classical civilizations of Greece and Rome, as well as the Middle Ages. Focus on those ideas and institutions from the past which continue to influence modern times.

3 Class Hours

HIS 130 United States History I **3 Credits**

The United States from 1607 to 1898. The colonies, Revolution, Constitution, early national period, Age of Jackson, expansion, Civil War and Reconstruction, the West and the Gilded Age. Survey of political, economic, cultural developments through the 19th Century

3 Class Hours

HIS 131 United States History II **3 Credits**

The United States from 1898 to the present. The American Empire, progressive reforms, World War I, the Twenties, Depression, New Deal, World War II and the Cold War, post-war domestic issues.

3 Class Hours

HIS 141 Development of Modern Latin America **3 Credits**

History of Latin America from Independence to the present, emphasizing the causes of political instability and economic backwardness. Close analyses of reform, reactionary and revolutionary movements in modern Latin America, and of inter-American affairs. (Formerly History of Latin America II.)

3 Class Hours

HIS 150 Russian and East European History I 3 Credits
Survey of Slavic history from early settlement in Kievan Russia and Eastern Europe, Mongol and Turkish conquests, rise of Muscovy and House of Hapsburg, reigns of Peter I and Catherine II, fate of Poland, Ottoman Empire in Europe, and other significant topics to the end of the Crimean War. (Not offered in 1978-79 academic year).

3 Class Hours

HIS 151 Russian and East European History II 3 Credits
From the latter half of the 19th Century including the gradual transition to modernity, imperialism of Russia, Austria and the Ottomans, rise of Balkan nationalism, the Dual Monarchy of Austria-Hungary, revolutions, World Wars I and II, Soviet hegemony and contemporary issues. (Not offered in 1978-79 academic year).

3 Class Hours

HIS 160 Traditional China and Japan 3 Credits
Investigation of the origins of Chinese and Japanese civilizations, emphasizing the influences of culture, geography, religion. Contrast with early Western development to establish the "unique mood" of pre-modern Asian society. Chronological coverage of the major historical eras.

3 Class Hours

HIS 161 Modern China and Japan 3 Credits
Investigation and analysis of the history of modern China and Japan in the 19th and 20th Centuries. Emphasis on events and changes in East Asia since the end of World War II. The increasing importance of China and Japan to the stability of the modern world. Major cultural developments as they serve to illuminate the behavior of modern East Asians.

3 Class Hours

SPECIAL TOPICS IN HISTORY (HIS 170-199)

HIS 170 The Future as History: A Look at the 21st Century United States 3 Credits

Does the future have to be a shock? The objective of this course is to prove it does not have to be. Three or four possible courses which the next 100 years may take will be plotted, using knowledge of the economic, political and social developments of the past 100 years of U.S. history and a basic understanding of the present day situation.

3 Class Hours

HIS 171 American Economic History (Same course as ECO 120) 3 Credits

A topical approach to the economic impetus behind the growth and development of the United States. Colonial heritage and the market system, population and natural resources, agriculture, transportation, labor, business, the capital market and the influence of government. Understanding today's economic problems by observing how they developed historically.

3 Class Hours

Cannot be used to satisfy **both** the history and Social Science requirement.

HIS 175 Local History 3 Credits

The early history of our local area including the late 18th Century Indian communities and the growth of 19th Century white settlements through development of industries and institutions from the days of the frontiersmen to the era of the railroaders and the factory hands. Historical methods of research. An historical walking tour of Binghamton, investigation of historical records on the premises of cooperative local institutions, and observation of contributions to local history. (Formerly HIS 231.)

3 Class Hours

HIS 180 Utopia: The History of Perfect Societies 3 Credits
Examines the relationship between the "real" and the "ideal" in fictional and actual utopian communities. Comparisons of utopian thought from the classical, medieval and modern periods, from the Garden of Eden to the contemporary commune. Writings of Plato, More, Condorcet, Owen, Saint-Simon, Fourier, Marx, Wells, Huxley, Teilhard de Chardin, Wagar and others.

3 Class Hours

HIS 183 Woman as a Force in History 3 Credits
Women's contributions to the evolution of Western institutions. Exploration of the origins of myths about women, women's roles in modern society, evolution of modern feminism. (Formerly HIS 227.)

3 Class Hours

HIS 186 Modern American Social History 3 Credits
Historical currents of social change and social reform in the 20th Century from the latter part of the 19th Century to the "Great Society." Reformist themes bearing on health, welfare, civil rights, labor and women's suffrage against the backdrop of hostile and supportive private groups. Creation of public institutions to meet human needs (the U.S. Public Health Service, the Social Security Administration), the response of the courts to organized reformist pressure, and social needs still unmet. For students in health-related and human services career programs.

3 Class Hours

HIS 190 The World Since 1945 3 Credits

An overview of the changing patterns in world affairs since the end of World War 2 in 1945. For example, emergence of the Third World, the Cold War, responses to scientific/technological change, insurgent movements, attempts at world organization-/disarmament, the energy/ecology crisis, the various trouble spots like the Middle East, Panama Canal, Berlin.

3 Class Hours

SHORT MODULES (HIS 200-295)

The department offers special short modules of courses that carry one credit each. These deal with concentrated topics in history and are less than one semester in length. For example, modules have been given in "The Great Man in History" series focusing on Adolf Hitler, Fidel Castro, Charles Darwin and Chairman Mao Tse-tung, each covering a 5-week period.

HIS 200 Series — Great Figures in History 1 Credit

Examining the advantages and disadvantages of using a biographical approach to the study of a particular period in history. In analyzing a "great figure," the student studies the interconnections between the actions of a great person, the role of chance and pressures of major social forces in shaping the course of human history.

3 Class Hours (For 5 weeks)

HIS 299 Independent Study 1-3 Credits

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson. Independent study does not satisfy the Liberal Arts requirement in history, and it may not be taken in lieu of a 100-series course.

Prerequisite: HIS 100 The Rise of the West

HUMAN DEVELOPMENT COURSES

Across the nation students have been indicating that they want the opportunity in college to identify, pursue and accomplish personal goals, to develop healthier self-concepts, to develop more effective levels of self-understanding and to become open human beings who can build trusting relationships with others. The student affairs courses can be one means of facilitating humanistic objectives espoused by "new" college students.

SAC 101 The Individual in a Changing Environment 3 Credits

Individual interaction and reading designed to foster understanding and application of psychological and emotional growth. Basic class material is the individual and group analysis of student's experience within an immediate unstructured setting. Focus on analysis and organization of experience into a personally rewarding conception of growth. Individual self-development projects outside the class.
3 Class Hours

SAC 295, 296 Seminar in Human Potential 3,2 Credits

Human Potential focuses on the person's own resources, strengths, motivators, values and successful and satisfying experiences. Human potential sessions are positive group experiences working on and with the potential and strengths of the feeling concerning one's self and others by utilizing specific procedures.
3, 2 Class Hours

HUMANITIES

HUM 201 The Concept of Man: Naturalism and Evolutionary Thought 3 Credits

An interdisciplinary course exposing the student to a broad spectrum of materials: drama, film, fiction and the arts, as well as expository anthropological and biological writing dealing with man's rediscovery of his "animality" and its effects on his self-concept. Focusing on the years 1850 to the present, the student reads such authors as Freud, Marx, Darwin, Crane, Dreiser, Zola, Morris, Lorenz and Shockley. Completion of a guided independent research project in an area of the student's interest is required.
3 Class Hours

INTERIOR DESIGN

INT 101 History of Design 3 Credits

Survey of exterior and interior architectural styles from Ancient Egyptian through 20th Century.
3 Class Hours

INT 110 Interior Design I 4 Credits

Color; projects in residential interior design including color coordination, floor plan, space utilization. Study of currently available resources.
2 Class Hours, 4 Laboratory Hours

INT 111 Interior Design II 4 Credits

Continuation of INT 110 Interior Design I. Projects in window treatments, walls and floors. Lighting problems. Practical experience in methods of measuring, estimating and installation. Materials for windows, walls and floors.

2 Class Hours, 4 Laboratory Hours
Prerequisite: INT 110 Interior Design I

INT 120 Furniture Design I 2 Credits

Design of living room, dining room and kitchen cabinetry.
2 Class Hours

INT 121 Furniture Design II 2 Credits

Design of seating units, sofas, chairs. Tables and occasional furniture. Practical experience in methods of upholstery and slipcovering. (Not to be given in 1978-79 college year.)

2 Class Hours, 1 Laboratory Hour

INT 130 Rendering 2 Credits

Perspectives of room interiors: treats the problems of representation related to light, texture and color.

4 Laboratory Hours

INT 140 Fabric Analysis 2 Credits

Types of fabrics used in interior design including methods of manufacturing, fiber and construction analysis, historical origins.

2 Class Hours

ITALIAN

ITA 101, 102 Beginning Italian 4, 4 Credits

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each
Prerequisite: ITA 101 Beginning Italian for ITA 102

ITA 201 Intermediate Italian I 3 Credits

Comprehensive review of grammar and structure of the language. Intensive reading of literary works as a basis for topics of conversation in Italian in the classroom. Emphasis on aural comprehension and oral practice in classroom and audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour
Prerequisite: ITA 102 Beginning Italian

ITA 202 Intermediate Italian II 3 Credits

Intensive reading of literary works of recognized authors as a basis for topics of conversation in Italian in the classroom. Practice in audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour
Prerequisite: ITA 201 Intermediate Italian I

ITA 299 Independent Study: Italian 1-3 Credits

An individualized student project concerned with advanced work in a specific area of Italian. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in Italian

LITERATURE

The Department of English recommends that students complete a composition program before taking literature courses.

LIT 210 Studies in United States Literature I **3 Credits**
History and development of United States literature from colonial period to late 19th Century. Emphasis on several major writers of the period.
3 Class Hours

LIT 211 Studies in United States Literature II **3 Credits**
History and development of United States literature from late 19th Century to the present. Emphasis on several major writers of the period.
3 Class Hours

LIT 214 Studies in British Literature I **3 Credits**
History and development of British literature from the Middle Ages to the 18th Century. Selections of literary merit from prose, drama, poetry.
3 Class Hours

LIT 215 Studies in British Literature II **3 Credits**
History and development of British literature from the beginning of the 18th Century to the middle of the 20th.
3 Class Hours

LIT 220 The World of the Short Story **3 Credits**
An examination of the development of American, British and Continental short stories. Emphasis on theme and structure.
3 Class Hours

LIT 230 American Drama **3 Credits**
Studies in dramatic theories, techniques and thematic problems of the American drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 233 World Drama **3 Credits**
Studies in dramatic theories, techniques and thematic relationships of the world drama. (Students taking this course may also be interested in THR 101 Fine Arts: Introduction to Theatre and THR 111 Acting.)
3 Class Hours

LIT 240 The Poetic Experience: Sight and Sound **3 Credits**
An exploration of the different modes and moods of poetic expression. A thematic and structural approach to poetry as a total experience.
3 Class Hours

LIT 250 Portraits of Women: Search for Understanding **3 Credits**
An in-depth examination of what it means to be a woman as presented by representative literary artists, both women and men, in critically acclaimed pieces of literature. Emphasis on 19th and 20th Century material.
3 Class Hours

LIT 253 Psychological Investigation in Literature **3 Credits**
The application of Jungian, Freudian and other psychological theories and insights to selected short stories, novels, and poems to promote more penetrating appreciation of characters' motivations and actions and the literary work in general.
3 Class Hours

LIT 255 Modern Existential Literature **3 Credits**
An investigation of the themes of alienation and the absurd in selected prose and poetry to shed light on man's current existential crisis.
3 Class Hours

LIT 257 Heritage of Modern Literature **3 Credits**
An attempt to define modern literature as an embodiment and development of antique themes and traditions through the comparative study of the epic, the novel and related genre.
3 Class Hours

LIT 260 Detective Fiction **3 Credits**
A critical study of one of the most popular literary forms of our time designed for armchair detectives. Starting with Poe, Conan Doyle (Sherlock Holmes) and other classics in the field, the course traces the development of the detective story from its puzzle-solving beginnings to the modern psychological novel of crime and detection.
3 Class Hours

LIT 263 Children's Literature **3 Credits**
Children's literature with introduction to the variety of books available today and development of standards for evaluating them. Prime concern is to help the student use literature with children creatively, recognizing the importance of language, arts, communication and listening skills in cognitive development.
3 Class Hours

LIT 265 Biblical Literature **3 Credits**
An acquisition of the skills necessary to study the Bible. Emphasis on the Biblical narrative and its relationship to Western culture through reading and analysis. (Not offered in 1978-79 college year).
3 Class Hours

LIT 269 Prison Literature **3 Credits**
An examination of the prison experience through a variety of readings in prose and poetry that focus on man's continuing struggle to understand this social phenomenon.
3 Class Hours

MARKETING COURSES

are under the Accounting heading starting on page 53

MATHEMATICS

MAT 003 Basic Mathematics Review

3 Credits*

*This is a self-paced mathematics course. Students may enter at any time during the semester. Credit is not applicable toward A.A., A.S., or A.A.S. degrees. Upon successful completion of a required unit, certificate programs may award some credits.

Basic Mathematics Review is designed to give the student proficiency in elementary mathematics and provide a firm foundation for credit courses. It consists of three units allowing each department to select the units needed as prerequisites for its courses or programs.

3 Class Hours

A. Arithmetic and Introduction to Algebra

Arithmetic of whole numbers, fractions and decimals. Percent, measurement, metric units, ratio and proportion. Language of algebra, arithmetic of signed numbers, solving simple equations. Problem solving.

B. Elementary Algebra

Addition, subtraction, multiplication, division and simplification of algebraic expressions. Graphing. Solving linear equations and inequalities in two variables. Solving fractional and quadratic equations. Problem solving.

Prerequisite: Basic Mathematics Review A

C. Geometry and Introduction to Trigonometry

Properties and measurements of angles. Similar and congruent triangles, polygons and circles. Perimeter, area and volume measurements. Use of trigonometric ratios to solve right triangle problems.

Prerequisite: Basic Mathematics Review A

A placement test will be given to determine if a student should enroll in the Basic Mathematics Review sequence or another mathematics course. Placement in Basic Mathematics Review will be based on a student's ability at the time of the test. Programmed material will allow each student to progress at own pace to complete the required units.

MAT 111 Mathematics, a Liberal Art I

3 Credits

Introduction to the variety and structural beauty of mathematics. Inductive and deductive reasoning, games and number theory, functions and their graphs, large numbers, exponents and logarithms, geometric patterns and symmetry. For Liberal Arts students — recommended for fine arts or humanities majors. Metric units of measure.

3 Class Hours

Prerequisite: Basic Mathematics Review A or equivalent

MAT 112 Mathematics, a Liberal Arts II

3 Credits

Introduction to the variety and structural beauty of mathematics. Mathematical curves in nature and science, combinations, permutations and probability, statistics, statistical graphs, misleading uses of statistics, topology and networks. For Liberal Arts students — recommended for fine arts and humanities majors

3 Class Hours

Prerequisite: MAT 111 Mathematics, a Liberal Art I or Basic Mathematics Review A or equivalent

MAT 117 Elementary Finite Mathematics with Algebra

4 Credits

Sets, probability, matrix algebra, graphing, inequalities, linear programming.

4 Class Hours

Prerequisite: Basic Mathematics Review A or equivalent

MAT 121 Finite Mathematics

3 Credits

Sets and logic, permutations, combinations and probability, vectors and matrices, inequalities and linear programming. The computer language BASIC is taught and used.

3 Class Hours

Prerequisite: Basic Mathematics Review B or equivalent

MAT 122 Introduction to Calculus

3 Credits

Analytic geometry of line, circle and parabola. Functions and their graphs. Limits and continuity, differentiation — rules and applications, integration — techniques and applications. Exponential and logarithmic functions and applications. Recommended for social science, health science and business students. Not for math majors or science majors in the A.S. degree program.

3 Class Hours

Prerequisite: MAT 121 Finite Mathematics or MAT 139 Algebra or equivalent

MAT 124 Statistics

3 Credits

Descriptive statistics, organization and presentation of data, measures of central tendency. Variance, standard deviation, binomial distribution, statistical inference. Random sampling, hypothesis testing, confidence intervals, normal distribution, analysis of variance. Chi-square distribution, students t-distribution, correlation and regression.

3 Class Hours

Prerequisite: Basic Mathematics Review A or equivalent

MAT 131 Modern Basic Mathematics I

3 Credits

Algebra of propositions. Algebra of sets. Systems of numeration other than base ten. Properties of the operations of addition and multiplication for the sets of whole numbers, integers and rational numbers. Introduction to number theory. For Liberal Arts students — recommended for elementary education majors.

3 Class Hours

Prerequisite: MAT 003 Basic Mathematics Review or equivalent

MAT 132 Modern Basic Mathematics II

3 Credits

Real number system. Informal geometry, congruence, measurement of areas and volumes, basic constructions. Coordinate geometry, lines, circles, equations. Inequalities and linear programming. Simple and conditional probability. Introduction to statistics. For Liberal Arts students — recommended for elementary education majors.

3 Class Hours

Prerequisite: MAT 131 Modern Basic Mathematics I and MAT 003 Basic Mathematics Review C or equivalent

MAT 139 Algebra

4 Credits

Real and complex numbers, algebraic operations, functions and graphs, exponents and logarithms, linear and quadratic equations, systems of linear equations, linear inequalities, binomial theorem.

4 Class Hours

Prerequisite: Basic Mathematics Review B or equivalent

MAT 140 Trigonometry

4 Credits

Trigonometric functions and their graphs, solution of triangles, trigonometric identities and equations, inverse trigonometric functions, position vectors, polar representation of complex numbers, DeMoivre's theorem.

4 Class Hours

Prerequisite: MAT 139 Algebra or equivalent

MAT 141 College Algebra and Trigonometry**4 Credits**

A review of algebra and trigonometry emphasizing computational skills and technical applications. Algebraic operations, functions and graphs, exponents and logarithms, linear equations, system of linear equations and determinants. Trigonometry and the solution of triangles, trigonometric functions and their graphs, quadratic equations, vectors, complex numbers. For engineering technology students.

4 Class Hours**MAT 142 Applied Calculus I****4 Credits**

Basic analytic geometry, distance, equations of lines. Limits, continuity and the derivative. Differentiation of polynomials, maxima and minima. Differentials and approximation, applications in kinematics and circuits. The definite integral and applications to finding area, center of gravity, volume of revolution, work done. Approximate integration, differentiating products and quotients, implicit differentiation and related rates, differentiation and integration of logarithmic, exponential, trigonometric and inverse trigonometric functions.

4 Class Hours

Prerequisite: MAT 141 College Algebra and Trigonometry or
MAT 140 Trigonometry

MAT 151 Mathematical Modeling I**4 Credits**

Computer techniques for the modeling and solution of problems in arithmetic, algebra and finite mathematics. Topics from number theory, algebra, logic and set theory, solutions of equations and inequalities, permutations and combinations, probability, statistics

4 Class Hours

Prerequisite: MAT 139 Algebra or equivalent

MAT 161 Pre-Calculus Mathematics**4 Credits**

The real number system, inequalities, graphing and the Cartesian Coordinate System, the algebra of functions, polynomial and rational functions, trigonometric functions, inverse functions, exponential and logarithmic functions.

4 Class Hours

Prerequisite: MAT 139 Algebra and MAT 140 Trigonometry or equivalent

MAT 163 Calculus with Analytic Geometry I**4 Credits**

Rectangular coordinate system and an introduction to analytic geometry of lines, functions. Differentiation of algebraic functions, applications of the derivative including the theory of extremes and related rates. Integration of polynomials and area between polynomials. Conic sections.

4 Class Hours

Prerequisite: MAT 161 Pre-Calculus Mathematics or
MAT 140 Trigonometry or equivalent

MAT 164 Calculus with Analytic Geometry II**4 Credits**

Opportunity, differentiation and integration of trigonometric functions and their inverses. Logarithmic and exponential functions. Differentiation of hyperbolic functions, parametric equations, polar coordinates. Techniques of integration, applications of integration including arc length, volumes of solids of revolution and center of gravity of plane figures and certain solids.

4 Class Hours

Prerequisite: MAT 163 Calculus with Analytic Geometry I

**MAT 171 Engineering Calculus with
Analytic Geometry I****4 Credits**

Equations of a line, rates of change, limits, continuity, derivatives of algebraic functions, applications: curve sketching, related rates, maxima and minima. Integration and applications: area, distance, volume, arc length, surface area, average value, moments, pressure, work.

4 Class Hours**MAT 172 Engineering Calculus with
Analytic Geometry II****4 Credits**

Trigonometric, logarithmic and exponential functions, methods of integration, plane analytic geometry and conic sections, hyperbolic functions, polar coordinates, vector functions and their derivatives, parametric equations.

4 Class Hours

Prerequisite: MAT 171 Engineering Calculus with
Analytic Geometry I

MAT 241 Applied Calculus II**3 Credits**

Integration by substitution, by partial fractions and by parts. Improper integrals, parabola, hyperbola, ellipse and translation of axes. First and second order linear differential equations. Partial derivatives, iterated and double integrals. Polar coordinates, curve plotting and area. Sequences, series, convergence tests, power series and Fourier series.

3 Class Hours

Prerequisite: MAT 142 Applied Calculus I

MAT 243 Differential Equations**4 Credits**

Equations of order one, integrating factors, substitution method, Bernoulli's equation, linear equations of higher order with constant and undetermined coefficients, variation of parameters, inverse differential operators, the Laplace transform.

4 Class Hours

Prerequisite: MAT 241 Applied Calculus II or
MAT 164 Calculus with Analytic Geometry II

MAT 246 Applied Linear Algebra**4 Credits**

A non-calculus study of matrices, determinants, vector spaces and linear transformations. (Not offered in 1978-79 academic year).

4 Class Hours

Prerequisite: MAT 241 Applied Calculus II

MAT 252 Mathematical Modeling II**4 Credits**

Computer techniques for the modeling and solutions of problems in numerical analysis. Topics include error analysis, roots of equations, linear and non-linear systems of equations, numerical integration, curve fitting, numerical solution of ordinary differential equations.

4 Credits

Prerequisites: MAT 151 Mathematical Modeling I and
either MAT 142 Applied Calculus I or
MAT 163 Calculus with
Analytical Geometry I or
MAT 171 Engineering Calculus with Analytical Geometry I

MAT 263 Calculus with Analytic Geometry III**4 Credits**

Limits and continuity, Delta epsilon proofs, indeterminate forms. Sequences, series, convergence tests, power series, Taylor's theorem. Analytic geometry and vectors in three-dimensional space including equations of lines, scalar products, vector products, equations of planes, differentiation, space curves, surfaces, cylindrical and spherical coordinates. Functions of several variables, limits, continuity, partial derivatives, tangents and normals, directional derivative, gradient, maxima and minima. Multiple integrals and applications.

4 Class Hours

Prerequisite: MAT 164 Calculus with Analytic Geometry II

MAT 264 Linear Algebra 4 Credits

Linear equation and matrices, real vector spaces, the algebra of linear transformations and matrices, determinants, eigenvalues and eigenvectors.

4 Class Hours

Prerequisite: MAT 164 Calculus with Analytic Geometry II or

MAT 172 Engineering Calculus with Analytic Geometry II or

MAT 241 Applied Calculus II

MAT 266 Introduction to Higher Mathematics 3 Credits

Exposure to basic mathematical methods and concepts. Sets, sequences, mappings, convergence. Preparation for analysis, topology and modern algebra.

3 Class Hours

Prerequisite: MAT 263 Calculus with Analytic Geometry III or

MAT 271 Engineering Calculus with Analytic Geometry III or

permission of instructor

MAT 271 Engineering Calculus with Analytic Geometry III 4 Credits

Solid geometry, lines and planes, vector calculus in space, quadric surfaces, partial differentiation, directional derivatives, gradient, line integrals, multiple integrals, infinite series, complex numbers and functions.

4 Class Hours

Prerequisite: MAT 172 Engineering Calculus with Analytic Geometry II

MAT 272 Differential Equations with Linear Algebra 4 Credits

First order differential equations. Matrices, determinants and solutions of systems of linear equations. Vector spaces, Wronskians, linear transformations and differential operations. Characteristic values and vectors, real symmetric matrices, functions of matrices. Homogeneous and nonhomogeneous linear differential equations with constant coefficients, undetermined coefficients and variations of parameters. Matrix formulation of linear systems of differential equations and solution by characteristic values, the exponential matrix function and nonhomogeneous linear systems. Series solutions of differential equations at ordinary and singular points.

4 Class Hours

Prerequisite: MAT 271 Engineering Calculus with Analytic Geometry III or

MAT 263 Calculus with Analytic Geometry III

MAT 299 Independent Study 1-4 Credits

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Department Chairperson Permission

MET 114 Engineering Drawing II 2 Credits

Fits and tolerances, developments and intersections, pictorial drawings, true position dimensioning (ANSI standards), assembly drawings, graphical design using standard industrial parts and descriptive geometry.

1 Class Hour, 2 Laboratory Hours

Prerequisite: MET 113 Engineering Drawing I

MET 115 Graphics 2 Credits

Basic course that includes lettering, orthographic projection dimensioning, sections, auxiliary views by instrument and free hand. True length, true size, relationships between lines and planes. For Engineering Science students.

1 Class Hour, 2 Laboratory Hours**MET 121 Manufacturing Processes I 3 Credits**

A basic study of manufacturing materials and processes, such as casting metal, production of ferrous and non-ferrous metals and shape changing processes of hot and cold working techniques. Oxyacetylene, arc, resistance welding. Machine tool operation, instrumentation and measurement.

2 Class Hours, 2 Laboratory Hours**MET 122 Manufacturing Processes II 2 Credits**

Abrasives and grinding, indexing, gearing, special machining processes such as numerical controls and electrical discharge machining. Advanced elements of machine tool operation including the use of grinding machines, turret lathe, honing, lapping.

1 Class Hour, 3 Laboratory Hours

Prerequisite: MET 121 Manufacturing Processes I

MET 129 Survey of Engineering Laboratories 3 Credits

Engineering materials, physical tests and manufacturing processes encountered in mechanical technology laboratories. Lectures, demonstrations and participation in manufacturing processes, casting, welding and forging, metallurgy, strength of materials, fluids and thermodynamics, technical sketching and blueprint reading, scientific calculators. For Secretarial Science students.

2 Class Hours, 2 Laboratory Hours**MET 132 Applied Mechanics 4 Credits**

STATICS: Free body diagram, trusses, friction, centroids, moments of inertia.

DYNAMICS: Motion of particles and bodies without consideration of the forces required to produce or maintain motion (kinematics), unbalanced forces and the motion they produce (kinetics), work and energy, impulse and momentum.

4 Class Hours

Prerequisites: PHY 141 Physics and

MAT 141 College Algebra and Trigonometry or

equivalent of department chairperson approval

MET 134 Fundamentals of Stationary Engineering 3 Credits

A course in general background information in basic topics relating to power plant engineering. Primary emphasis on the operation and maintenance of boiler room equipment including steam cycling-condensing, related mathematics, boiler mountings and bracings, boiler operation, inspection and repair, chemistry of combustion and feedwater treatment. Satisfactory completion of the course is one of the requirements to qualify for the New York State Civil Service Fireman examination.

2 Class Hours, 1 Laboratory Hour**MET 152 Engineering Materials 4 Credits**

Physical and chemical properties of engineering materials. Mechanical tests, structure, phases, relationship and reactions within metallic and non-metallic structure.

4 Class Hours

MECHANICAL TECHNOLOGY

MET 113 Engineering Drawing I 2 Credits

Basic course that includes lettering, line and instrument exercises, orthographic projection, sketching, dimensioning, auxiliary views, sections, threads, fasteners.

1 Class Hour, 2 Laboratory Hours

MET 235 Strength of Materials 3 Credits

Normal and shear stress and strain, elastic and plastic deformation, torsion, stress in thin-walled cylinders, joints, shear force and bending moment in beams, beam stresses, beam deflection, multi-directional plane stress.

2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 132 Applied Mechanics

MET 238 Mechanical Design 4 Credits

An analysis of machine motion and the design of machine elements. Analysis of motion of linkages and mechanisms for displacement, velocity and acceleration relationships. Design and analysis of weldments, fasteners, springs, power screws, couplings, shafts, clutches, gears and bearings.

3 Class Hours, 3 Laboratory Hours
Prerequisite: MET 235 Strength of Materials

MET 241 Fluid Mechanics and Thermodynamics 3 Credits

FLUID MECHANICS: Fluid statics and dynamics, steady flow energy equations, laminar and turbulent flow viscosity and fluid friction, flow measurement.

THERMODYNAMICS: Perfect gas law, specific heats, property and energy relationships in non-flow and steady flow processes for gases, internal combustion engine cycles, nozzles and diffusers, gas turbines.

2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 132 Applied Mechanics

MET 224 Thermodynamics 3 Credits

Property and energy relationships in steady flow processes for vapors, power and refrigeration cycles, nozzles and diffusers. Heat transfer in plane and circular geometry, film coefficients, heat exchangers.

2 Class Hours, 3 Laboratory Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

MET 245 Energy Conservation 2 Credits

Emphasis on developing an understanding of energy, its uses and the problems involved with its exploration, conversion and transmission. The influence of energy on man and his environment. A class tour to industries which have energy control devices and energy management programs.

1 Class Hour, 2 Laboratory Hours

MET 246 Refrigeration and Air Conditioning 3 Credits

Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads, distribution systems, refrigeration systems, cooling load and air conditioning calculations, controls and control systems.

3 Class Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

***MET 247 Air Conditioning and Refrigeration 3 Credits**

Energy transfer systems and controls used for cooling an environment below the temperature of its surroundings. Air and humidity calculations, heat transfer and transmission coefficients, heating loads. Thermodynamics and fluid flow concepts essential for satisfactory treatment of the above areas of study.

3 Class Hours
Prerequisite: PHY 141 Physics

MET 248 Fluid Power 3 Credits

Static and dynamic fluid force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.

3 Class Hours
Prerequisite: MET 241 Fluid Mechanics and Thermodynamics

***MET 249 Fluid Power 3 Credits**

Fluid statics and fluid dynamics preceding a treatment of static and dynamic force systems used for both actuation and control of mechanical devices. Applications of frequently used fluid power components and circuits.

3 Class Hours
Prerequisite: MET 132 Applied Mechanics

MET 252 Engineering Materials and Industrial Processes 4 Credits

Properties, applications and processing of engineering materials including metallic, non-metallic, and composites.

3 Class Hours, 3 Laboratory Hours
Prerequisites: MET 121 Manufacturing Processes I and
MET 235 Strength of Materials

***MET 253 Engineering Materials and Industrial Processes 3 Credits**

Properties, applications and processing of engineering materials including metallic, non-metallic and composite materials.

2 Class Hours, 2 Laboratory Hours
Prerequisite: MET 121 Manufacturing Processes I and
MET 235 Strength of Materials

***MET 255 Introduction to Plastics Engineering 3 Credits**

Basic concepts of chemical structure and the physical properties of thermoplastic and thermoset materials including additives in plastics, heat transfer and flow behavior of plastic melt, testing and property measurement, processing techniques with emphasis on extrusion and injection molding, defect analysis and troubleshooting, process control and instrumentation, material selection and application, commercial plastics, trade names, suppliers and prices.

3 Class Hours

MET 261 Engineering Statistics and Quality Control 3 Credits

Measures of central tendency, variance, standard deviation, binomial distribution, normal distribution, statistical inference, hypothesis testing, confidence intervals, chi-square and students t-distribution, correlation and regression, similar elements of statistics as they pertain to engineering problems. Control chart analysis.

2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 141 College Algebra and Trigonometry or
MAT 139 Algebra

MET 272 Automotive Systems**3 Credits**

Functional elements of the automobile. The fuel system, ignition system, the engine cycle, pollution control system, the chassis and basic elements of engine tuneup.

2 Class Hours, 2 Laboratory Hours

MET 280 Management Decisions*2 Credits**

Objective criteria and evaluations in making management decisions. Currently accepted procedures to conceive management models and systems.

2 Class Hours

MET 285 Time, Motion and Wage Study*2 Credits**

Analysis of time spent and methods used for industrial tasks. Relation to wage structure on individual and plant-wide basis.

2 Class Hours

Prerequisite: MAT 139 Algebra

MET 286 Production Control*2 Credits**

Planning, scheduling and routing of goods through a plant from raw materials to finished products. Production control principles, the control of manufacturing processes.

2 Class Hours

Prerequisite: MAT 139 Algebra

MET 287 Plant Layout and Materials Handling*2 Credits**

Plant arrangement as it influences industrial operations. Assembling data, coordinating operations, developing operational layouts, evaluative arrangements. Materials handling requirements, planning and evaluation.

2 Class Hours

Prerequisite: MAT 139 Algebra

MET 295 Seminar**1-3 Credits**

An opportunity for the interested student to become involved with the process of research, formal paper preparation, formal delivery and defense of ideas presented. Also a critical evaluation of ideas set forth by others.

Prerequisite: As established by the Department Chairperson

MET 299 Independent Study**2-3 Credits**

The student undertakes an independent project in his specialty under the guidance of a faculty member. Only one independent study course allowed per semester. Consideration may be given a project involving a work assignment.

Prerequisite: Approval of Department Chairperson

MEDICAL LABORATORY TECHNOLOGY**MLT 111 Introduction to Clinical Laboratory Methods and Practices****2 Credits**

To acquaint the medical laboratory student with the history and scope of clinical laboratory medicine. Responsibility and professional ethics to self, employer, physician and patient. Field trips to clinical laboratory facilities. Basic clinical laboratory procedures and methodologies for urinalysis performed in laboratory sessions.

1 Class Hour, 2 Laboratory Hours

MLT 112 Hematology**3 Credits**

Anatomy and pathophysiology of the blood and hemopoietic tissue. Techniques and procedures for studying and evaluating blood in health and disease. Laboratory work includes specialized hematological techniques and procedures.

2 Class Hours, 4 Laboratory Hours

Prerequisite: MLT 111 Introduction to Clinical Laboratory

Methods and Practices or permission of instructor

MLT 211 Clinical Chemistry I**4 Credits**

Principles and methods of analytical clinical chemistry applied to the physiochemical measurements of body function in health and disease. Emphasis on those chemical tests related to excretion, digestion, metabolism and protein synthesis. Laboratory work includes the related chemical tests and specialized analytical instrumentation.

2 Class Hours, 6 Laboratory Hours

Prerequisite: One year general chemistry and one year biology or permission of instructor

MLT 212 Clinical Chemistry II**4 Credits**

A continuation of MLT 211 Clinical Chemistry I. Emphasis on those chemical tests related to liver function, blood gases, pH and electrolyte balance, enzyme, hormones in health and disease. The laboratory work includes the specific related chemical test and specialized analytical instrumentation.

2 Class Hours, 6 Laboratory Hours

Prerequisite: MLT 211 Clinical Chemistry I or permission of instructor

MLT 222 Clinical Physiology**2 Credits**

Emphasis on the utilization of clinical laboratory testing methods in identifying diseases and dysfunction of cellular and body processes. The disordered biochemistry of the disease processes are studied from a case-oriented approach. The case studies cover diseases or dysfunction related to respiration, digestion, circulation, metabolism and excretion.

2 Class Hours

Prerequisite: Senior year status or permission of instructor

MLT 232 Blood Banking and Serology**3 Credits**

Introduction to blood banking. Blood typing, ABO, Rh, antiglobulin tests, cross-matching, incompatibilities resulting from pregnancies or transfusions. Selected serological diagnostic procedures and principles.

2 Class Hours, 2 Laboratory Hours

Prerequisite: MLT 112 Hematology or permission of instructor

MLT 251 Microbiology II (Diagnostic)**4 Credits**

A continuation of BIO 150 Microbiology I. Emphasis on infectious diseases, communicability, diagnosis and identification of causative organisms, including bacteriology and parasitology.

3 Class Hours, 4 Laboratory Hours

Prerequisite: BIO 150 Microbiology I or permission of instructor

MEDICAL OFFICE ASSISTANT

MOA 102 Medical Assisting Science

2 Credits

Introduction to medical specialties and problems with related vocations. Responsibility of medical assistant to self, physician and patient. Principles of professional ethics. Professional affiliation. Field trips. For Medical Office Assistant students.

2 Class Hours

MOA 112 Standard First Aid and Personal Safety, Cardio-Pulmonary Resuscitation

1 Credit

The causes, care and prevention of accidental/emergency life-saving situations. Mastery level of learning for the proficiency of basic skills. Cardio-pulmonary resuscitation prepares students to recognize, evaluate and initiate care for cardiac emergencies. Certification by American Red Cross or American Heart Association.

2 Laboratory Hours

MOA 115 Medical Assisting Procedures

4 Credits

Clinical procedures of medical assisting in the physician's office. Use and management of diagnostic instruments and equipment. Related patient care, professional ethics and nomenclature. For Medical Office Assistant students.

3 Class Hours, 2 Laboratory Hours

Prerequisite: MRT 105 Medical Terminology
or consent of instructor

MOA 201 Medical Assisting Procedures

4 Credits

Laboratory introduction to microscopic analysis of blood and urine. Also simple blood chemistry tests in medical office. Study of formation of blood cells and urine. For Medical Office Assistant students.

2 Class Hours, 4 Laboratory Hours

MOA 206 Medical Office Management

4 Credits

Medical office administrative procedures, such as accounting principles and practices, patient health records, insurance forms, banking and postal services, payroll records, patient fees and ledger cards, office machines. Mechanics of applicable medical correspondence including letters, manuscripts. Emphasis on letters of inquiry and reply, claims and adjustment, credit and collection. For Medical Office Assistant students.

3 Class Hours, 3 Laboratory Hours

MOA 210 Pharmacology

2 Credits

A practical course relevant to medical curriculums. Emphasizes knowledge of prescriptions and prescription writing. Basic principles of mathematics of pharmacy. Drugs governed by U.S.P. standards which are in common use and their generic-pharmaceutical relationship. Drug grouping and action relevant to human physiology. For Medical Office Assistant and Medical Record Technology students.

2 Class Hours

Prerequisite: BIO 131 Human Biology I

MOA 211 Medical Assisting Procedures

4 Credits

Advanced technical procedures in medical assisting specifically oriented to the various medical specialties. Techniques of electrocardiography, audiometry and physical therapy. Field trips and practical experiences give additional background outside of the classroom. For Medical Office Assistant students.

2 Class Hours, 4 Laboratory Hours

MOA 245 Directed Practice

5 Credits

Directed practical experience in the physicians' offices, medical centers, school health departments, rehabilitation clinics, and other health care institutions, weekly seminars. For Medical Office Assistant students.

1 Class Hour, 16 Laboratory Hours

Prerequisite: MOA 211 Medical Assisting Procedures

MEDICAL RECORD TECHNOLOGY

MRT 101 Medical Record Science

3 Credits

Introduction to the historical development of the health care field and to the medical record department with an overview of the medical record professional association. Numbering and filing systems and methods. Storage and retrieval systems. Definitions of, standards for, and development of a medical record as to content, format, evaluation and completion.

2 Class Hours, 2 Laboratory Hours

MRT 105 Medical Terminology I

2 Credits

Medical terminology as correlated with anatomical systems. Suffixes, prefixes, root words and use of the medical dictionaries. For Medical Office Assistant and Medical Record Technology students.

2 Class Hours

MRT 107 Medical Transcription

2 Credits

Designed to introduce the student to the knowledge and skills required for medical machine transcription in a health care facility. A practical experience in transcribing including proper format and a variety of medical reports.

4 Laboratory Hours

Prerequisite: MRT 105 Medical Terminology

MRT 110 Medical Record Science

4 Credits

Hospital statistics, sources, definitions, collection, reporting and presentation of data. Purposes of classifying diseases and operations, difference between and historical development of nomenclature and classification systems. Value and use of indexes and registers including the Tumor Registry.

2 Class Hours, 4 Laboratory Hours

Prerequisite: MRT 101 Medical Record Science

MRT 115 Medical Terminology II

2 Credits

A continuation of MRT 105 Medical Terminology I. Emphasis on terminology associated with the cardiovascular, digestive, respiratory, genito-urinary and endocrine systems.

2 Class Hours

Prerequisite: MRT 105 Medical Terminology I

MRT 144 Directed Practice**4 Credits**

Directed summer practical experience in the hospital medical record department. Development of insight and skills into the basic medical record procedures. Graduation requirement.

40 Laboratory Hours per week for 4 Weeks**Prerequisite:** MRT 110 Medical Record Science**MRT 202 Medical Record Science****3 Credits**

Importance of the medical record as a legal document. A comprehensive review of the organization of the medical staff, primarily within the hospital. Background and medical record keeping in long term care facilities. Certification by accrediting and governmental agencies.

2 Class Hours, 2 Laboratory Hours**Prerequisites:** MRT 110 Medical Record Science and BIO 132 Human Biology II**MRT 208 Advanced Medical Transcription****1 Credit**

Review of medical terminology emphasizing specialized terminology. Advanced medical transcription techniques through the use of recorded history and physical examinations, discharge summaries, consultation reports, operative reports and outpatient notes.

3 Laboratory Hours**Prerequisite:** MRT 107 Medical Transcription**MRT 210 Medical Record Science****3 Credits**

Introduction to the history of medicine. Ambulatory health care and its implications on medical record practice. Retrospective medical auditing. Principles of management and the role of the supervisor in management of a medical record department.

2 Class Hours, 2 Laboratory Hours**Prerequisite:** MRT 202 Medical Record Science**MRT 216 Clinical Practicum****1 Credit**

Designed to enable the students to utilize the knowledge and skills obtained in the classroom. Includes performing the functions of an actual medical record department and the use of a computer.

2 Laboratory Hours**Prerequisites:** MRT 110 Medical Record Science and MRT 144 Directed Practice**MRT 245 Directed Practice****4 Credits**

Directed practice experience in the hospital and related affiliation sites. Correlated with MRT 210 Medical Record Science to develop insight and skills into advanced medical record procedures.

16 Laboratory Hours**Prerequisites:** MRT 202 Medical Record Science and MRT 144 Directed Practice**MRT 295 Medical Record Seminar****2 Credits**

Detailed study and analysis of specific problems encountered in the administration of a medical record department. Correlated with directed clinical practice. Case study and extensive literature review.

2 Class Hours**MUSIC****MUS 101 Fine Art: Introduction to Music****3 Credits**

Basic elements of music common to all forms of musical expression. Emphasis on developing listening habits, which bring the student to an informed awareness and understanding of music. Attendance at concerts and recitals.

3 Class Hours**MUS 105 Music Theory I****3 Credits**

A beginning course in music theory, including basic rudiments of music. Pitch and rhythmic notation, scales and intervals. Ear training through melodic and rhythmic drills and dictation.

3 Class Hours**MUS 106 Music Theory II****3 Credits**

Continuation of Music Theory I. Traditional harmony, exercises in melodic, rhythmic and harmonic dictation, aural analysis, beginning composition.

3 Class Hours**Prerequisite:** MUS 105 Music Theory I or consent of instructor**MUS 110 17th and 18th Century Music****3 Credits**

Music and musical styles of the 17th and 18th Centuries. Emphasis on the composers and their styles and the relationship of music to the social, political and other cultural reforms of the period. (Not offered in 1978-79 academic year).

3 Class Hours**Prerequisite:** MUS 101 Introduction to Music or consent of instructor**MUS 111 19th Century Music****3 Credits**

Important musicians and musical styles of the Romantic Period. Emphasis on developments in piano literature, the symphony orchestra and opera. Listening to selected recordings and attendance at local concerts. (Not offered in 1978-79 academic year).

3 Class Hours**Prerequisite:** MUS 101 Introduction to Music or consent of instructor**MUS 112 20th Century Music****3 Credits**

Important musicians and musical styles in the 20th Century. Emphasis on the trends and development of music in America. Leading European composers. (Not offered in 1978-79 academic year).

3 Class Hours**Prerequisite:** MUS 101 Introduction to Music or consent of instructor**MUS 190 The College Choir****1 Credit**

Students who sing in the College Choir receive one credit per semester. See page 23.

MUS 191 Instrumental Musical Association**1 Credit**

Students who play in the musical groups sponsored by the Instrumental Music Association receive one credit per semester. See page 23.

MUS 299 Independent Study: Music**1-3 Credits**

An individual student project concerned with advanced work in a specific area of music. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in music

NURSING

A GRADE OF C OR BETTER IS REQUIRED TO PASS EACH NURSING COURSE

ADN 100 Meeting Basic Human Needs 7 Credits

Introduction to nursing concepts and principles. The total human being incorporating biophysiological and psychosocial components. Emphasis on maintaining homeostasis within the illness/wellness continuum. The needs approach, based on Maslow's Hierarchy of Human Needs, is emphasized. Skills in providing safe bedside nursing care, such as simple treatments, pharmacology and basic nutrition. Integrating knowledge of communication skills, nursing process, problem solving, mental mechanisms, normal responses to stress, crisis intervention, body responses to pathology. Adaptation of nursing intervention directed toward meeting basic needs of the chronically ill, the aging and those individuals facing death.

5 Class Hours, 6 Laboratory Hours

ADN 101 Nursing Care During the Life Cycle 7 Credits

The Life Cycle from conception to middle-age. Correlating basic human needs and the developmental tasks in each age group. The family cycle, as one of the tasks of the young adult. Emphasis on preparation for parenthood, the experience of parenthood, and the psychosocial implications of the young family. Learning principles identified and incorporated into the nursing process. Situational and maturational crises as normal aspects of the life cycle. Adaptation of nursing intervention directed toward meeting basic needs of the middle aged. Nursing intervention for diagnostic testing.

5 Class Hours, 6 Laboratory Hours

Prerequisites: ADN 100 Meeting Basic Human Needs and BIO 131 Human Biology I

ADN 203 Immobility Concepts 4 Credits

The nursing process as it meets the needs of individuals experiencing complex physiological and psychological problems due to immobility. Concepts of neurological, orthopedic and sensory deprivation nursing. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

(Half Semester)

5 Class Hours, 9 Laboratory Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 204 Regulatory Concepts 4 Credits

The nursing process is applied to the needs of individuals with disturbances of the regulatory physiological mechanisms. Content includes nursing concepts of stress, fluids and electrolytes, endocrinology. Related health behavior and teaching. Extended campus laboratory experience is correlated. Successful achievement in the extended campus laboratory is required.

(Half semester)

5 Class Hours, 9 Laboratory Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 205 Psychological Concepts I 2 Credits

The nursing process as it meets the needs of individuals experiencing psychological stress. Psychiatric nursing concepts applied to behavioral disturbances. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

1 Class Hour, 3 Clinical Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 206 I, I and O Concepts

4 Credits

The nursing process as it meets the needs of individuals with complex physiological and/or psychological stress due to problems of inflammation, infection and obstruction. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

(Half semester)

5 Class Hours, 9 Clinical Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 207 Oxygenation Concepts

4 Credits

The nursing process is applied to needs of individuals experiencing disturbances of oxygenation. Broad concepts applied to problems of the hemopoietic, respiratory, vascular and cardiac systems. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

(Half semester)

5 Class Hours, 9 Clinical Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II

ADN 208 Psychological Concepts II

2 Credits

Continued application of the nursing process as it meets the needs of individuals experiencing psychological stress. Content includes psychiatric concepts applied to behavioral changes. Extended campus laboratory experiences are correlated with class content. Successful achievement in the extended campus laboratory is required.

1 Class Hour, 3 Laboratory Hours

Prerequisites: ADN 101 Nursing Care During Life Cycle and BIO 132 Human Biology II and ADN 205 Psychological Concepts I

ADN 295 Nursing Seminar

2 Credits

Broad survey course examining the effects of a changing society upon the delivery of health care. Topics to be chosen by the students and presented by them. The National League for Nursing Achievement exams are a guide for individual's further study before taking the New York State Board test pool for registration.

2 Class Hours

Prerequisites: ADN 203 Immobility Concepts, ADN 204 Regulatory Concepts and ADN 205 Psychological Concepts I

PHILOSOPHY

PHI 101 Philosophical Problems

3 Credits

Basic problems of philosophy, such as *a priori* knowledge, the reality of the physical world, morality, the mind-body relationship, freedom and the supernatural. (Not offered in 1978-79 academic year).

3 Class Hours

PHI 102 Introduction to Philosophy

3 Credits

Meaning of philosophy, suggestions for reading philosophy, informal logic, methodology and basic philosophical terms including idealism, dualism, naturalism.

3 Class Hours

PHI 103 Philosophy of Mind**3 Credits**

Theories of major philosophers as to the nature and limits of human knowledge and the nature of reality. Problem of knowledge of the physical world, the mind-body problem, free-will problem, existentialist's view of man. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours**PHI 104 Philosophy of Religion****3 Credits**

Relation of religion and philosophy and an investigation of different concepts of God. Analysis of religious types and experiences, different attempts to justify religious beliefs. Investigation of the logic of religious experience through an analysis of the leading ideas in the philosophy of religion both as an historical and contemporary phenomenon. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours**PHI 111 Humanities****3 Credits**

Critical analysis of man's development from his early beginnings to his present state through a thematic investigation of literature, philosophy, history and the arts. Classical, Medieval, Renaissance and Metaphysical Periods.

3 Class Hours**PHI 112 Humanities****3 Credits**

Critical analysis of man's development from his early beginnings to his present state through a thematic investigation of literature, philosophy, history and the arts. Neo-classical, Romantic, Victorian, Early Modern and Late Modern Periods.

3 Class Hours**PHI 120 Verbal Reasoning****3 Credits**

To improve the students' ability in reasoning. Concentration on qualification, symbols, ambiguity, analysis and semantics. (Not offered in 1978-79 academic year).

3 Class Hours**PHI 201 Ethics****3 Credits**

Main classical and modern ethical theories, including such theorists as Plato, Aristotle, Spinoza, Mill, Kant, Moore, Toulmin, Ayer, Westermarck. Comparison and contrast of normative and meta-ethical theories, the good life and how one should act, the meaning of moral judgments and the criteria of validity, justification of moral beliefs and the grounds of moral responsibility. PHI 102 Introduction to Philosophy recommended as a prerequisite.

3 Class Hours**PHI 202 Logic****3 Credits**

Analysis and practical application of the elements of logic as they apply to thinking on both a linguistic and formal level. Forms of argument, informal and formal fallacies, significance of the emotions on decision making, inductive and deductive processes.

3 Class Hours**PHI 203 Philosophical Issues in American Education****3 Credits**

Philosophy of selected American educators, with attention on the historical development of the American educational system. Brief review of educational outlooks from antiquity to the present, including Plato, Aristotle, Rousseau. Analysis of educational issues and of key terms in education from philosophical perspective. The nature of the individual, the school and society and the underlying philosophical interrelations that may exist. PHI 102 Introduction to Philosophy recommended as a prerequisite. (Not offered in 1978-79 academic year).

3 Class Hours**PHI 204 Comparative Religions: Living Religions of the East****3 Credits**

Survey of the major religions of the Eastern societies. Comparison of their similarities and differences. Focus on the contributions of religion to society in every day living, and its influence on thinking, culture and arts. Areas covered are primitive religions, the religions of India, Persia, Indochina, China, Japan. (Not offered in 1978-79 academic year).

3 Class Hours**PHI 205 Comparative Religions: Living Religions of the West****3 Credits**

Survey of the major religions of the West. An examination of central beliefs, such as the belief that God is a Personal God and that there is life after death. Comparison made of their similarities and differences. Focus on the contributions of religion to society in everyday living, and its influence on the thinking, culture and arts of Western society. Areas covered are Zoroastrianism, Judaism, Christianity and Islam. (Not offered in 1978-79 academic year).

3 Class Hours**PHI 206 Social and Political Philosophy****3 Credits**

A philosophical study of the social/political organization of society by examining such topics as justice, authority, leadership, individual rights, and of the relationship between the state and various social institutions, such as family, business, church, and schools.

3 Class Hours**PHI 299 Independent Study: Philosophy****1-3 Credits**

An individual student project concerned with advanced work in a specific area of philosophy. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in philosophy**PHYSICAL EDUCATION****PED 100 Archery****1/2 Credit**

Fundamentals of shooting — seven-step approach. Proper target shooting technique and form stressed.

4 Class Hours, 11 Laboratory Hours per semester**PED 103 Back Packing****1 Credit**

Designed to prepare students for a camping experience inaccessible by auto. The art of being self-sufficient with everything on your back. A three-day campout on the trail. Lightness stressed by eliminating all unnecessary items and utilizing lightweight food, shelter, sleeping bag and cooking equipment.

15 Class Hours, 15 Laboratory Hours per semester**PED 106 Badminton****1/2 Credit**

Instruction and practice in the various strokes. Rules, terminology and equipment. Strategy for singles and doubles.

4 Class Hours, 11 Laboratory Hours per semester

PED 109 Basketball **1/2 Credit**
 Instruction and practice in the fundamental skills of passing, dribbling, shooting and defense. History, rules, tactics, and team play. Basketball as a carry-over sport. (Not offered in 1978-79 academic year).
4 Class Hours, 11 Laboratory Hours per semester

PED 112 Bowling **1/2 Credit**
 Bowling fundamentals including ball selection, grip, stance, approach and delivery. Etiquette, scoring, correction of basic mistakes in delivery. Classes are at off-campus site and students must pay for own games, shoe rental and transportation.
3 Class Hours, 12 Laboratory Hours per semester

PED 115 Circuit Training and Conditioning **1/2 Credit**
 Individualized program on weight machine. Student is pre-tested to determine starting level. Principles of training, components of fitness and proper technique.
3 Class Hours, 12 Laboratory Hours per semester

PED 118 Field Hockey **1 or 1/2 Credit**
 Basic skills needed for good competition in game situations. Emphasis on rules and responsibilities of each position on the team. Organized competition within the class. (Not offered in 1978-79 academic year).
4 Class Hours, 11 Laboratory Hours per semester

PED 121 Golf **1/2 Credit**
 Skills, rules, etiquette and strategy. Field trips to a driving range and/or par-3 golf course, with students providing their own transportation and fees. Advanced students to play on a regulation course, providing their own transportation, greens fees and clubs.
4 Class Hours, 11 Laboratory Hours per semester

PED 127 Jogging **1/2 Credit**
 Jogging as a possible leisure time activity. Physiological and psychological benefits, improvement of technique and basic principles of training. Individual works at own level and sets own goals. Distance usually worked: 2 miles.
3 Class Hours, 12 Laboratory Hours per semester

PED 142 Skiing **1/2 Credit**
 Instruction and practice in all phases of skiing (beginning through advanced). Conduct, terminology, safety and equipment. Basic racing technique demonstrated and practiced where sufficient skill level and interest are indicated. Classes at an off-campus site; students must pay necessary fees and provide their own transportation.
3 Class Hours, 12 Laboratory Hours per semester.

PED 143 Ski Touring **1 or 2 Credits**
 Instruction and practice in cross-country skiing — beginning through advanced. Conduct, terminology, safety and equipment. Classes both on and off campus. Skis, poles, bindings provided; students responsible for boots and transportation.
3 Class Hours, 12 Laboratory Hours

PED 145 Slimnastics **1/2 Credit**
 Exercises for all muscles of the body. Duration of each exercise and number of exercises used during the class hour gradually increased. Music used for intensive exercise routines.
4 Class Hours, 11 Laboratory Hours per semester

PED 148 Soccer **1/2 Credit**
 Instruction and practice in the fundamental skills of kicking, tackling, trapping, dribbling and heading. Rules and tactics. Team competition.
4 Class Hours, 11 Laboratory Hours per semester

PED 154 Speedball **1/2 Credit**
 A combination team sport involving skills common to soccer, basketball and football. Development of skills, rules and strategy of the game. Speedball is a fast moving, quick thinking game played with hands and feet.
4 Class Hours, 11 Laboratory Hours per semester

PED 169 Tennis **1/2 Credit**
 Instruction and practice in the basic strokes — forehand, backhand, serve and volley. Rules, terminology and equipment. Strategy for singles and doubles.
4 Class Hours, 11 Laboratory Hours per semester

PED 172 Volleyball **1/2 Credit**
 A basic course in the fundamentals of power volleyball. Team strategy, history and rules of United States Volleyball Association. Drills and competitive play.
4 Class Hours, 11 Laboratory Hours per semester

PED 175 Weight Training **1/2 Credit**
 Individualized work on weight machine. Student selects activities along with instructor's guidance. Emphasis on improvement of weaknesses and a balanced approach. Physical fitness, principles of training. (Not offered in 1978-79 academic year).
3 Class Hours, 12 Laboratory Hours per semester

PED 299 Independent Study **1/2 or 1 Credit**
 Student undertakes a project of own choice with guidance from faculty member. The project is intended for a student who has completed requirements.
Prerequisite: 2 Semester Hours in Physical Education

PHYSICAL SCIENCE

PHS 111 Physical Science for Today **3 Credits**
 Beginnings of astronomy, the earth and moon, planets and satellites, the sun and other stars, cosmology. Chemistry of our atmosphere, weather and methods of modification, water cycle and pollution. Composition of the earth's crust, erosional processes, earthquakes and volcanoes, plate tectonics, nuclear radiation, man and his environment. Required field trips supplement classroom experience.
2 Class Hours, 2 Laboratory Hours

***PHS 112 General Physical Science** **2 Credits**
 Beginnings of astronomy, the earth and moon, planets and satellites, the sun and other stars, cosmology. Chemistry of our atmosphere, weather and methods of modification, water cycle and pollution. Composition of the earth's crust, erosional processes, earthquakes and volcanoes, plate tectonics, nuclear radiation, mankind and environment. Required field trips supplement classroom experience.
1 Class Hour, 2 Laboratory Hours

PHS 113 Physical Science — Astronomy **4 Credits**
 The Copernican and Ptolemaic models of the solar system. The planets, sun, moon and comets. Stellar magnitudes and evolution of stars. The size and age of the universe and modern developments in astronomy and cosmology. Required field trips supplement classroom experience.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHS 115 Physical Science — Geology **4 Credits**
 Crystals, minerals, rocks — their structure and identification. Erosion of the crust, its uplift and deformation. Earthquakes and the interior of the earth, geologic dating and the physical history of the earth. Plate tectonics and continental drift, ecology from a geologic viewpoint. Required field trips supplement classroom experience.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHS 116 Physical Science — Environment **4 Credits**
 Basic physical principles and the role of these principles in understanding and appreciating the problems of the environment. Problems of pollution and depletion of natural resources. Application of physics in the every-day world. Required field trips supplement classroom experience.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent.

PHY 131 Astronomy (Physical Science) **1 Credit**
 Historical sketch, earth and moon, tools and methods of the astronomer, planets and satellites, comets and meteors, the sun, constellations, stellar distances, stellar spectra. Hertzsprung-Russell diagram, variety among stars, galaxies and cosmology. This is a 5-week course. (Not offered in 1978-79 academic year).
3 Class Hours

PHS 132 Geology (Physical Science) **1 Credit**
 Composition of the earth's crust, igneous rocks, sedimentary rocks, metamorphic rocks, erosion, glaciers, ground water, earthquakes, continents, oceans, geologic dating. This is a 5-week course. (Not offered in 1978-79 academic year).
3 Class Hours

PHS 133 Meteorology (Physical Science) **1 Credit**
 Properties of the atmosphere, heat energy, thermal circulation, effect of the earth's rotation, frictional drag, vertical stability, cyclones, anticyclones, monsoons, thunderstorms, air masses, tornadoes, climate, weather forecasting. This is a 5-week course. (Not offered in 1978-79 academic year).
3 Class Hours

PHYSICS

PHY 100, 101 Preparatory Physics I and II **4, 4 Credits**
 Composition and resolution of vectors. Statics and dynamics. Conservation laws, wave motion, sound and light. Thermodynamics, electricity and magnetism. The physics of the atom.
4 Class Hours each
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHY 117 Physics **3 Credits**
 Vectors, linear motion, energy, momentum, electric fields, potential difference, Ohm's law, d-c circuits, motion of charges in magnetic fields, electromagnetic induction. Mirrors and lenses, nature of light, atomic structure, production of X-rays, radioactive decay, nuclear reactions, interaction of radiation with matter, radiation detection, radiation protection standards.
2 Class Hours, 2 Laboratory Hours
Prerequisite: MAT 003 Basic Mathematics Review or equivalent

PHY 141 Physics **4 Credits**
 Composition and resolution of vectors, forces in equilibrium, moments of forces, elasticity, linear and projectile motion, forces and motion, rotation, work and energy, impulse and momentum, harmonic motion, fluid mechanics, temperature, thermal expansion, heat. For Engineering Technology students.
3 Class Hours, 2 Laboratory Hours
Corequisite: MAT 141 College Algebra and Trigonometry or equivalent

PHY 142 Physics **4 Credits**
 Thermodynamics, thermal properties of gases, wave motion and sound, electrostatics, direct current, magnetism, electromagnetic induction, alternating current, electromagnetic radiation, illumination, reflection and refraction of light, mirrors and lenses, optical instruments, diffraction, nuclear energy. For Engineering Technology students.
3 Class Hours, 2 Laboratory Hours
Prerequisite: PHY 141 Physics

PHY 161 Physics **4 Credits**
 Structure and language of physics, physical and chemical behavior of matter, concepts and measurement of length, time and mass. Vectors and vector algebra, motion and relativity. Dynamics and energy — Newton's Laws, impulse and momentum, conservation of energy, kinetic theory, heat and energy, thermodynamics. First course in an introductory non-calculus sequence. For Liberal Arts students who need a laboratory science.
3 Class Hours, 3 Laboratory Hours
Prerequisite: MAT 141 College Algebra and Trigonometry or equivalent

PHY 162 Physics **4 Credits**
 Wave phenomena-vibrations, simple harmonic motion, interference, sound, light, optics. Electricity and magnetism — electrostatics, electrical circuits, electromagnetic phenomena. Modern physics — quantum theory, atomic structure, radioactivity. Second half of introductory physics course for Liberal Arts students.
3 Class Hours, 3 Laboratory Hours
Prerequisite: PHY 161 Physics

PHY 181 Engineering Physics I **4 Credits**
 Vectors, equilibrium, kinematics, Newton's Laws of Motion, centripetal force, work and energy, impulse and momentum, rotation, elasticity, harmonic motion, hydrostatics and hydrodynamics.
3 Class Hours, 2 Laboratory Hours
Corequisite: MAT 163 Calculus with Analytic Geometry I or MAT 171 Engineering Calculus with Analytic Geometry I

PHY 182 Engineering Physics II **4 Credits**
 Relativistic mechanics, Coulomb's Law, electrostatic field, potential, capacitance, direct currents, magnetic force on currents, magnetic field of a current, induced emf, inductance, alternating currents.
3 Class Hours, 2 Laboratory Hours
Corequisite: MAT 164 Calculus with Analytic Geometry II or MAT 172 Engineering Calculus with Analytic Geometry II

PHY 271 Physics (Electricity and Magnetism) **4 Credits**
 Fundamental laws of electric and magnetic fields with application to elementary circuit problems. Electrostatic fields, induced emfs, inductance, capacitance, dielectrics, steady currents, simple transients. Wave motion as applied to sound and acoustical phenomena. Geometrical optics, optical parts, optical instrumentation. Physical optics, nature of light, interferometry, polarization of light.
4 Class Hours
Prerequisites: PHY 172 Physics and 1 Year of Calculus

PHY 272 Physics (Modern)**4 Credits**

Special theory of relativity, quantum description of waves and particles, Bohr's theory of atomic structure, Schrodinger's equation, quantization of angular momenta, atomic spectra, nuclear radiation detection instruments, high-energy accelerators, nuclear force, binding energy of stable nuclei, radioactive decay, low-energy nuclear reactions, neutrons, fission, fusion.

4 Class Hours**Prerequisites:** PHY 271 Physics and 1 Year of Calculus**POLITICAL SCIENCE****POS 201 Introduction to American Government****3 Credits**

American political institutions, processes and behavior. The relationships among cultural, legal and social aspects of the political system. Structure, organization and function of political parties, pressure groups and mass media. Application to contemporary issues and events.

3 Class Hours**POS 203 International Relations****3 Credits**

Basic concepts and principles of world politics. International conflict resolution, international organizations, the struggle for power. Factors affecting the relationships among the major powers. Role of diplomacy, alliances, war and peace in the world arena. (Not offered in 1978-79 academic year).

3 Class Hours**POS 204 American State and Local Government****3 Credits**

Theory and practice of state and local government, utilizing a problem-solving or "policy" approach. Students are encouraged to explore in depth the workings of city and county governments locally.

3 Class Hours**POS 299 Independent Study****1-3 Credits**

An independent student project which is beyond the scope of courses currently offered by the department, directed by a faculty member with approval of the department chairperson.

Prerequisite: 3 semester hours of political science**PSYCHOLOGY****PSY 100 Psychology of Personal Adjustment****3 Credits**

Investigation of bio-cultural factors which influence human behavior and study of the development of well-adjusted personality. Attention is directed to the learning and thinking the individual employs in solving personal problems in everyday living. (This course cannot be used as a prerequisite for other psychology courses.)

3 Class Hours**PSY 103 Psychology of Adulthood****3 Credits**

Investigation of the continuity-change pattern that characterizes normal adulthood (20 to 60 years). Identification of individual responses to life crises. Introduction to skills that facilitate meeting self-selected goals and skills that assist others to fulfill their goals.

3 Class Hours**PSY 110 General Psychology****3 Credits**

Definition and description of psychology. Functions of the neural system, sensation and perception, learning, memory, motivation, emotion, conflict and frustration, personality, social psychology. Methods and statistical applications, history and fields of psychology.

3 Class Hours**PSY 211 Child Development****3 Credits**

The growth, maturation and development of children, including mental and motor phases, learning, motivation and personality formation.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 212 Adolescent Development****3 Credits**

The adjustment processes necessary for the child to become an adult. Development of socialization, personal goals and enlargement of self-concept. Formative influences of social institutions and environmental elements relative to the growth of the individual.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 214 Abnormal Psychology****3 Credits**

Description and criteria for normal and abnormal personality. Dynamic processes of adjustment, the coping process. Definition and description of sociopathic, psychopathic, neurotic and psychotic behavior. Development of both functional and organic disorders.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 217 Counseling and Interviewing****3 Credits**

Varied methods of interviewing and counseling, group dynamics employing current theories, situational examples and means for determination of method to be used. Practical cases in social services, clinics, hospitals and educational institutions. Overall training and personality of the counselor.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 223 Intelligence and the Mentally Retarded****3 Credits**

The several meanings of the concept of intelligence, distribution of intelligence in populations, development and organization of intelligence at different levels, concepts of retardation. The various levels and causations of retardation, development at all chronological ages, learning and employment expectations, methods of assisting with behavioral improvement, cooperative social agencies.

3 Class Hours**Prerequisite:** PSY 110 General Psychology**PSY 227 Behavior Modification****3 Credits**

Principles of behavior modification using classical and operant techniques. Practical applications of these principles to the fields of child care, psychotherapy and correctional institutions.

3 Class Hours**Prerequisite:** PSY 110 General Psychology

PSY 299 Independent Study**1-3 Credits**

An individual student project in psychology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

Prerequisite: PSY 110 General Psychology plus 3 additional hours in a 200 level PSY course

RADIOLOGIC TECHNOLOGY**RAD 100 Introduction to Radiologic Technology****1 Credit**

Introduction and orientation to the radiologic technology profession. The professional conduct of the radiologic technologist. (Half Semester.)

2 Class Hours

RAD 101 Radiologic Technology I**3 Credits**

Individual modules including radiation protection, recording media, film processing, radiographic quality, and radiographic accessories.

3 Class Hours, 1 Laboratory Hour

RAD 102 Radiologic Technology II**3 Credits**

A modular approach to radiological mathematics, advanced study of radiographic quality, preparation of technique charts, sensitometry, and portable radiography.

3 Class Hours

Prerequisite: RAD 101 Radiologic Technology I or permission of instructor

RAD 110 Methods of Patient Care**2 Credits**

The professional conduct of the radiologic technologist and related patient care procedures routinely used in the department of radiology. Understanding of the basic procedures utilizing contrast media. Identifying basic medical terminology with emphasis on radiographic consultations.

1 Class Hour, 2 Laboratory Hours

RAD 130 Directed Practice**3 Credits**

Instruction and practice in radiographic positioning of the appendicular skeleton, chest and abdomen, with related practical application in an affiliated hospital (Half Semester).

18 Laboratory Hours

RAD 131 Extended Campus Laboratory (Winterim)

Winterim clinical assignment devoted to observation and application of elementary radiographic procedures under direct supervision in a cooperating hospital. (Graduation Requirement.)

Total of 80 Laboratory Hours

Prerequisites: RAD 130 Directed Practice,

BIO 131 Human Biology I and

RAD 110 Methods of Patient Care

RAD 132 Directed Practice**4 Credits**

Instruction and practice in radiographic positioning of the axial skeleton, with related practical application in an affiliated hospital.

18 Laboratory Hours

Prerequisite: RAD 131 Extended Campus Laboratory

RAD 133 Summer Extended Campus Laboratory

Summer practice in radiographic positioning and technique at an assigned hospital to qualify for State Licensing and American Registry Examinations. A graduation requirement.

Prerequisites: RAD 132 Directed Practice and BIO 132 Human Biology II

RAD 210 Radiologic Physics**4 Credits**

Principles of the construction and function of radiographic equipment; troubleshooting and preventive maintenance.

4 Class Hours

Prerequisite: PHY 116 Physics or permission of instructor

RAD 215 Nuclear Medicine and Radiation Therapy**1 Credit**

Basic concepts and principles related to the use of radiopharmaceuticals and therapeutic radiation in medicine.

1 Class Hour

Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 220 Radiological Pathology**2 Credits**

Medical and surgical diseases and their relationship to radiographic procedures.

2 Class Hours

Prerequisite: BIO 132 Human Biology II

RAD 225 Special Radiographic Procedures**4 Credits**

Introduction to radiographic examinations involving surgical procedures and specialized equipment.

3 Class Hours, 2 Laboratory Hours

Prerequisites: RAD 230 Directed Practice and BIO 132 Human Biology II or permission of instructor

RAD 230 Directed Practice**4 Credits**

Instruction and practice in advanced positioning techniques of the skull and facial bones, including intraoral radiography with related practical application in an affiliated hospital.

18 Laboratory Hours

Prerequisite: RAD 133 Summer Extended Campus Laboratory or permission of instructor

RAD 231 Extended Campus Laboratory (Winterim)

Winterim clinical assignment devoted to the application of radiographic procedures under direct supervision in a cooperating hospital. A graduation requirement.

Prerequisite: RAD 230 Directed Practice or permission of instructor

RAD 232 Directed Practice**3 Credits**

Application of advanced radiographic procedures under direct supervision in an affiliated hospital.

16 Laboratory Hours

Prerequisite: RAD 231 Extended Campus Laboratory

RAD 233 Summer Extended Campus Laboratory

Summer practice in advanced radiographic positioning and technique at an assigned hospital to qualify for State Licensing and American Registry Examinations. A graduation requirement.

Prerequisite: RAD 232 Directed Practice or permission of instructor

RAD 240 Radiation Health**2 Credits**

Biomedical aspects of the effects of ionizing radiation together with general and specialized techniques used for protection of patients and personnel. Federal and state regulations and guidelines for radiation installations.

2 Class Hours, 1 Laboratory Hour

Prerequisite: RAD 210 Radiologic Physics or permission of instructor

RAD 295 Seminar in Radiography**2 Credits**

Preparation of the technical report and its organization for both written and oral presentation. Readings in current literature and journals.

2 Class Hours**Prerequisite:** Senior Year Status**READING AND STUDY SKILLS****RDG 010 College Reading****3 Credits***

Individual diagnosis of a student's reading strengths and weaknesses, development and implementation of a program geared to upgrade skills necessary for success in college courses. Course length and content will vary with individual student.

3 Class Hours

*These credits do not fulfill degree requirements.

RDG 110 Rapid Reading**1 Credit**

Development of skills characteristic of the mature reader. Examination of structure of material, emphasis on identification of purpose, flexibility of rate. Some experience with rapid reading techniques.

2 Class Hours**RDG 120 Speed Reading****1 Credit**

Theories of speed reading coupled with extensive practice in developing a greater range in effective reading rate. Emphasis on adjusting rate and comprehension to the type and level of material. Use of reading accelerators, controlled reading, tapes.

1 Class Hour, 1-3 Laboratory Hours

The following courses are limited-credit activities for students wishing to enhance various study skills:

LRS 101 Learning Skills: Time Scheduling and Concentration**1/2 Credit**

General principles of academic success, relationship of outside work and study, scheduling and organizing time, study and concentration. Students will construct a working study schedule.

3 Class Hours, 3 Weeks**LRS 102 Learning Skills: Remembering, Forgetting and Exams****1/2 Credit**

Theories of memory. Methods of review, strategies for taking essay and objective examinations.

3 Class Hours, 3 Weeks**LRS 103 Learning Skills: Textbook Mastery****1/2 Credit**

Use of college textbooks as study aids, principles of effective text reading, text study systems. Extensive application of these principles in the student's own textbook.

3 Class Hours, 3 Weeks**LRS 104 Learning Skills: Listening, Note-Taking and Lecture Mastery****1/2 Credit**

Examination of organizational patterns as they exist in oral communication. Exploration of systems on note-taking, and application of systems to student's own lectures and notes.

3 Class Hours, 3 Weeks**RESPIRATORY COURSE*****RES 120 Intensive Care Unit****3 Credits**

Recognition, medical management and prevention of acute respiratory diseases. Anatomy of the respiratory system including blood gas analysis, care of the airway and mechanical ventilation. Some previous medical terminology desired.

3 Class Hours**SECRETARIAL SCIENCES****SEC 101 Typewriting****3 Credits**

Beginning sequence in touch typewriting to make the operator accurate, rhythmical and rapid in the operation of the typewriter. Presentation of keyboard typing of centering problems, memorandums, postal cards, personal and business letters, outlines, manuscripts. Development of proficiency of techniques of typing business letters, tabulations, reports, miscellaneous business forms. Building of typewriting speed and accuracy.

2 Class Hours, 3 Laboratory Hours**SEC 102 Typewriting****3 Credits**

Continuation of basic skill building with emphasis on speed and accuracy in typing business letters, manuscripts, memorandums, tables, various business forms, financial statements, data sheets, employment applications.

2 Class Hours, 3 Laboratory Hours**Prerequisite:** SEC 101 Typewriting or equivalent**SEC 103 AVT Typewriting****3 Credits**

Development of the basic techniques of typewriter operation by an audio-visual-tutorial system (AVT) of instruction which permits the student to proceed at own pace. Slide-tape presentations include keyboard mastery, machine operation, horizontal and vertical centering, business applications such as letters, manuscripts, outlines, tabulations, forms. Building of typewriting speed and accuracy.

SEC 104 AVT Typewriting**3 Credits**

Continuation of basic skill building with emphasis on speed and accuracy in typing advanced materials by an audio-visual-tutorial system (AVT) of instruction which permits the student to proceed at own pace. Slide-tape presentations include letter styles and notations, manuscripts, advanced tabulation, alignment, applications, data sheets, memorandums, business statements and forms.

Prerequisite: SEC 103 AVT Typewriting or**SEC 101 Typewriting or equivalent**

***SEC 105 Introductory Typewriting 2 Credits**

Touch typewriting. Presentation of keyboard, typing of centering problems, memorandums, postal cards, personal and business letters, outlines, manuscripts. Emphasis on speed and accuracy.

2 Class Hours, 2 Laboratory Hours

***SEC 106 Intermediate Typewriting 2 Credits**

Continued speed and accuracy emphasis. Typing of business letters, manuscripts, memorandums, tables, various business forms, financial statements, data sheets, employment applications.

2 Class Hours, 2 Laboratory Hours

Prerequisite: SEC 105 Introductory Typewriting or equivalent

SEC 110 Shorthand 3 Credits

Beginning course in Gregg Shorthand, Diamond Jubilee System. Basic principles to promote the ability to read fluently from plates and notes. Longhand and typewritten transcription from shorthand notes dictated from unfamiliar material at minimum rate of 60 words a minute.

2 Class Hours, 3 Laboratory Hours

Prerequisite: SEC 101 Typewriting or equivalent or concurrent enrollment in SEC 101 Typewriting

SEC 111 Shorthand and Transcription 4 Credits

Development of a minimum rate of 70 words per minute shorthand speed, dictated from unfamiliar material, with efficient transcription techniques to produce typewritten mailable transcripts. Emphasis on shorthand speed building while integrating the correct usage of principles of grammar, spelling, punctuation, capitalization, vocabulary, numbers, word division, words often confused.

2 Class Hours, 5 Laboratory Hours

Prerequisites: SEC 110 Shorthand or equivalent and SEC 101 Typewriting or equivalent

SEC 151 Business Communications 3 Credits

Development of desirable written communication style. Review of basic writing mechanics. Composition of letters of inquiry and reply, claim and adjustment, credit and collection, sales and promotion, application. Memorandums, news releases, short reports, telegrams.

3 Class Hours

Prerequisite: SEC 101 Typewriting or equivalent

SEC 153 Office Communications 3 Credits

Practice in written and oral communication. Review of grammar and basic mechanics of effective writing.

3 Class Hours

Prerequisites: SEC 101 Typewriting or equivalent and ENG 100 Basic Language Skills

SEC 210 Executive Typewriting 3 Credits

Training in advanced typing techniques and magnetic keyboard equipment. Emphasis on preparing documents for law, insurance, real estate, investment, education. Continuation of typewriting speed building.

2 Class Hours, 2 Laboratory Hours

Prerequisite: SEC 102 Typewriting and SEC 240 Office Practice

SEC 212 Technical Typewriting 3 Credits

Training in understanding the correct procedures in preparing typewritten technical materials and magnetic keyboard equipment. Emphasis on typing equations, formulas, laboratory reports. Continuation of typewriting speed building.

2 Class Hours, 2 Laboratory Hours

Prerequisite: SEC 102 Typewriting and SEC 240 Office Practice

SEC 230 Advanced Shorthand 3 Credits

Development of shorthand speed with the introduction of special short cuts to increase efficiency. Transcription at the typewriter from notes dictated from unfamiliar material at minimum rate of 80 words per minute. Development of proficiency in production of mailable typewritten transcripts from the student's shorthand notes.

2 Class Hours, 3 Laboratory Hours

Prerequisites: SEC 111 Shorthand and Transcription and SEC 102 Typewriting

SEC 232 Specialized Dictation: Executive 3 Credits

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of investment, law, insurance.

2 Class Hours, 3 Laboratory Hours

Prerequisites: SEC 230 Advanced Shorthand and SEC 102 Typewriting

SEC 234 Specialized Dictation: Engineering 3 Credits

Emphasis on increasing shorthand speeds and improving production of mailable typewritten transcripts through an increased knowledge of basic information and vocabulary from the specialized areas of aerospace, life sciences, synthetics, hydrocarbons-petrochemicals, electronics, communications, computer, nucleonics.

2 Class Hours, 3 Laboratory Hours

Prerequisite: SEC 230 Advanced Shorthand and SEC 102 Typewriting

SEC 240 Office Practice 2 Credits

Advanced typing material on selected topics using various typewriters. Practical experience in operation of calculating, duplicating, transcribing machines, and magnetic keyboard equipment. Training in telephone procedures on the college switchboard.

4 Laboratory Hours

Prerequisites: SEC 111 Shorthand and Transcription and SEC 102 Typewriting

SEC 242 Secretarial Procedures**3 Credits**

Final preparation for a secretarial career including the steps of the job interview process. Business activities related to the secretarial profession — word processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.

3 Class Hours, 1 Laboratory Hour

Prerequisite: SEC 230 Advanced Shorthand and SEC 240 Office Practice

SEC 244 Office Practice/Procedures**3 Credits**

Final preparation for an office career. Business activities related to the office services environment — word processing, postal and shipping services, telephone procedures, travel arrangements, planning meetings, banking services, application of filing procedures.

2 Class Hours, 3 Laboratory Hours

Prerequisites: SEC 102 Typewriting and SEC 151 Business Communications

SEC 246 Office Machines**3 Credits**

Practical experience in the operation of various typewriters including magnetic key-board equipment, calculators, mimeo and spirit duplicators, transcribing and dictating equipment.

5 Laboratory Hours

Prerequisite: SEC 102 Typewriting or concurrent enrollment

SEC 248 Office Procedures**3 Credits**

Analysis of the basic tasks performed by the office employee. How to apply for and secure the office position. Filing systems and procedures, telephone and telegram services, postal information, office supplies and equipment.

3 Class Hours

Prerequisite: SEC 102 Typewriting or concurrent enrollment

SEC 260 Directed Secretarial Experience — Model Office**3 Credits**

Secretarial students are required to work at least four hours weekly in the model office to gain practical working knowledge by producing various types of campus communications.

2 Class Hours, 2 Laboratory Hours

Prerequisite: For Executive and Engineering Secretarial students — SEC 102 Typewriting and Sec 111 Shorthand and Transcription.
For Office Services Assistant students — Sec 102 Typewriting and SEC 151 Business Communications

SEC 264 Machine Transcription**3 Credits**

Emphasis on increasing skill in transcribing recorded materials. Continuing development of knowledge of business vocabulary, correct usage of principles of grammar, punctuation, spelling in the machine transcription of business documents.

2 Class Hours, 2 Laboratory Hours

Prerequisites: SEC 101 Typewriting or equivalent

SEC 299 Independent Study**1-4 Credits**

Advanced investigation or research in an individual student's major field of study. Under the guidance of a faculty member, the independent study concerns material beyond the scope and depth of the ordinary course offering. Only one independent study course is allowed per semester.

Prerequisite: Approval of faculty member and department chairperson

SIGN LANGUAGE***HUS 120 Sign Language****3 Credits**

Introduction to total communication as a means of conversing with the deaf. Ameslan (American Sign Language), fingerspelling, numbers, idioms, non-verbal communication, singing songs, poems, stories, psychology of the deaf.

3 Class Hours***HUS 220 Intermediate Sign English****3 Credits**

Intermediate Sign English (Ameslish) is straight English syntax using Ameslan based on conceptual signs in English syntax.

3 Class Hours

Prerequisite: HUS 120 Sign Language or permission of instructor

SOCIAL SCIENCE (INTERDISCIPLINARY)**SOS 100 Urban Society****3 Credits**

Conditions, trends and problems of contemporary urban American society. Efforts and proposals for making the cities, suburbs and exurbs better places to live and work in during a time of increasing population and increasing population concentration. A look at such urban systems as education, housing, transportation, criminal justice, business. Consideration of the "Rural Renaissance." Brief focusing upon the current roles of religion, the media, recreation. (Not offered in 1978-79 academic year).

3 Class Hours**SOS 120 Science and Civilization****3 Credits**

A survey of the interplay between science/technology and Western Civilization from earliest times to the present (major emphasis on the industrial and post-industrial periods). Role of culture in determining scientific/technological advances, interplay between war and scientific/technological advances, necessary conditions for an industrial revolution (scientific/technological), impact of science/technology on a post-industrial society.

3 Class Hours**SOS 130 Man, Technology and Environment****3 Credits**

Biological, economic and political dimensions of the environmental crisis. The conditions created by population growth, a rising standard of living, the increased demand on natural resources, and the advance of technology. Alternative strategies to deal with pollution and energy problems.

3 Class Hours**SOS 145 Psychology of Sex Roles****3 Credits**

Biological, social and psychological determinants of maleness and femaleness. Physical, economic, political, Biblical and psychological causes of sexism (male superiority). Relationship to cultural evolution.

3 Class Hours**SOS 146 Aging: An Overview****3 Credits**

Multidisciplinary analysis of the bio-psycho-social characteristics of older persons. Examination of major issues and dynamics involved in the process of growing old.

3 Class Hours

Prerequisite: PSY 110 General Psychology or permission of instructor

**SPECIAL TOPICS IN SOCIAL SCIENCE
(SOS 150-250)**

Courses in this sequence will sometimes be off-campus offerings developed for special audiences, such as TV and newspaper courses.

SOS 160-169 Case Studies in Ethnicity 3 Credits

A sociological analysis of the origins and experiences, the cultural patterns and social relationships of Americans from various ethnic backgrounds.

1 Class Hour

SOS 290 Social Science Field Experience 3 Credits

Introduction to the practical issues of the "helping relationship" and an understanding of agency operations. Each student to spend a minimum of 90 hours working in community social and educational agencies. Weekly seminars, outside reading and written reports are required. During the seminars specific helping techniques such as facilitating, goal-setting, reinforcing and supporting will be analyzed.

1 Class Hour

**Prerequisite: 3 Credit hours in psychology or sociology
plus completion of or concurrent enrollment
in 3 additional credit hours in either of these areas**

SOCIOLOGY

SOC 110 Introduction to Sociology 3 Credits

Sociological facts and principles dealing with the scientific study of human relationships. Emphasis on analysis and study of culture and human society, socialization, groups and group structures. Stratification, collective behavioral patterns and the concept of social institutions. Initial experiences for students who desire an introduction to the sociological perspective.

3 Class Hours

SOC 111 Social Problems 3 Credits

The sociology of social and urban problems. Topics may include crime, population, inequality, discrimination, mental illness, attitudes toward work, social control and the dynamics of social change. Students should be aware that individual instructors approach these problems in different ways, depending on students' needs and instructors' interests. SOC 110 Introduction to Sociology is recommended as an initial experience.

3 Class Hours

SOC 210 Crime and Deviant Behavior

3 Credits

The theoretical aspects of deviance as crime, variations in crime rates, the social and psychological causes of crime, other deviant behavior and the salient research discoveries in these areas. Specific areas within criminology such as homicide and suicide from a multidisciplinary approach to permit as broad an understanding of the problem as possible.

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology

SOC 220 Minority Groups

3 Credits

Various minority-majority (racial and ethnic) situations confronting contemporary America. Special focus on the sociological ramifications of these situations. Social movements and conflicts. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology

SOC 230 Marriage, Family and Divorce

3 Credits

Social and personal factors which make for adequate family functioning, the forms the family takes, its internal processes and the functions it serves in society. Covers systematically the important theoretical and experimental ground on those issues relevant to both the scholarly and practice-minded student.

3 Class Hours

Prerequisite: SOC 110 Introduction to Sociology

SOC 299 Independent Study

1-3 Credits

An individual student project in sociology which is beyond the scope or requirements of the courses offered by the department, conducted under the direction of a faculty member and approved by the department chairperson.

Prerequisite: 3 semester hours in sociology

SPANISH

SPA 101, 102 Beginning Spanish

4, 4 Credits

Basic principles of grammar and syntax. Emphasis on oral practice in classroom, supplemented by work in audio-lingual laboratory. Reading and discussion of graded literary and cultural texts.

4 Class Hours, 1 Laboratory Hour each

Prerequisite: SPA 101 Beginning Spanish for SPA 102

SPA 201 Intermediate Spanish I

3 Credits

Intensive review and continuation of grammar and syntax. Intensive and extensive reading of literary works of recognized authors. Aural comprehension and oral practice in the classroom and audio-lingual laboratory.

3 Class Hours, 1 Laboratory Hour

Prerequisite: SPA 102 Beginning Spanish

SPA 202 Intermediate Spanish II

3 Credits

Intensive and extensive reading of literary works of recognized authors. Classroom discussion and conversation based on these texts, in the language.

3 Class Hours, 1 Laboratory Hour

Prerequisite: SPA 201 Intermediate Spanish I

SPA 203, 204 The Spanish Language Through Its Literature

3, 3 Credits

Practice in and emphasis on conversation and composition in Spanish, based on the reading of various literary masterpieces from centuries past to the present. (Not offered in 1978-79 academic year).

3 Class Hours each

Prerequisites: SPA 202 Intermediate Spanish II for SPA 203

SPA 203 The Spanish Language Through Its Literature for SPA 204

SPA 205 Spanish Conversation and Composition I

3 Credits

The art of conversation and writing in Spanish practiced from basic proficiency to that of a more advanced level. Topics of conversation of common, daily interest subjects. Writing of short paragraphs and letters. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: SPA 202 Intermediate Spanish II or equivalent

SPA 299 Independent Study: Spanish

1-3 Credits

An individual student project concerned with advanced work in a specific area of Spanish. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in Spanish

SPEECH

SPK 100 Basic Speaking

2 Credits

Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types. Not for Liberal Arts students.

2 Class Hours

SPK 102 Effective Speaking

3 Credits

Speech communication through voice, words and action. Voice production, diction, platform presence. Organization of ideas. Practice in presenting speeches of different types.

3 Class Hours

SPK 299 Independent Study: Speech

1-3 Credits

An individual student project concerned with advanced work in a specific area of speech. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in speech

THEATER

THR 101 Fine Arts: Introduction to Theater

3 Credits

Art of the theater to increase understanding and appreciation of drama. A cultural approach considering the interrelationship of all aspects of production including plays, acting, directing, costume, make-up and lighting. Attendance at local productions. (Students taking this course may also be interested in LIT 230 American Drama, LIT 233 World Drama.) (Not offered in 1978-79 academic year).

3 Class Hours

THR 109, 110 Practicum in Theater Design and Technology

3, 3 Credits

Stage design (both lighting and scenic) and construction techniques are studied first hand, as students participate in actual production of two plays each semester. Problems encountered during a production are analyzed. Individualized instruction is increased as students begin to focus on their particular areas of interest. (Not offered in 1978-79 academic year).

3 Class Hours each

Prerequisite: THR 101 Introduction to Theater or consent of instructor

THR 111 Acting

3 Credits

Fundamental acting techniques. Development of individual skills and disciplines relative to external acting techniques. Use of face, voice and movement.

3 Class Hours

THR 112 Acting

3 Credits

Intensive application of acting techniques through scene study and performance. Problems of character analysis, internal acting and style.

3 Class Hours

THR 190 Broome Community College Theater

1 Credit

Students who participate in the plays and performances of the BCC Theater Co. receive one credit per semester. See page 23.

THR 201, 202 Children's Theater

3, 3 Credits

Design and construction of costumes, sets and properties for touring children's production. Study and analysis of children-oriented plays. Performance at community elementary schools and organizations.

3 Class Hours each

THR 221 History of the Theater

3 Credits

History of stage production with emphasis on theater as a performing art. Chronological examination of theater activity as a mirror of social and cultural experience from primitive times through the Renaissance. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: THR 101 Introduction to Theater or permission of instructor

THR 222 History of the Theater

3 Credits

History of stage production from the 18th Century to the present, with attention to the contribution of literature and the fine arts to stage development. (Not offered in 1978-79 academic year).

3 Class Hours

Prerequisite: THR 101 Introduction to Theater or permission of instructor

THR 299 Independent Study: Theater

1-3 Credits

An individual student project concerned with advanced work in a specific area of theater. Conducted under the direction of a faculty member, independent study is concerned with material beyond the scope and depth of the ordinary course.

Prerequisite: 3 semester hours of college level work in theater

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RALPH WALTER
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PHYSICS

See Engineering Science and Physics Department

PLANNING AND DEVELOPMENT

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B.B.A., Cleveland State University
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PUBLIC RELATIONS

See Community Relations

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R.T. Nesbitt Memorial Hospital
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Records and Scheduling

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M.B.A., University of Denver

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M.S., SUNY College at Cortland
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CHARLES CROLL, Prof.
B.A., SUNY at Binghamton
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A.B., University of South Carolina
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B.S., East Stroudsburg State College
M.S., SUNY College at Cortland
NORMAN T. HERBERT, Assoc. Prof.
B.S., Massachusetts Institute of Technology
M.B.A., Syracuse University
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Emeritus
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ADJUNCT FACULTY

The following taught part-time at the College during the 1977-78 academic year:

ACCOUNTING AND BUSINESS ADMINISTRATION

ROBERT A. BORNE
RICHARD CONKLIN
B.S., M.S., SUNY at Binghamton
RONALD C. FINCH
A.A.S., Broome Community College
B.S., SUNY at Binghamton
ELWOOD K. FORESTER
B.S., Bob Jones University
JOHN H. HARTMAN
B.A., Brown University
J.D., Syracuse Law School
EDWARD IMM
B.S., Emerson College
THOMAS KETRICK
CLIFFORD J. OLSON
B.S., Hofstra University
BARBARA K. PAPUCCI
A.B., Marywood College
CHARLES RANDALL
LLOYD A. ROGERS
B.B.A., Clarkson College of Technology
GEORGE C. SHEA
B.S., M.S., SUNY at Albany
RICHARD TUCKER
B.A., SUNY at Binghamton
RAYMOND K. VAN NESS
A.A.S., Broome Community College
B.S., Elmira College
DENNIS WALKER
A.S., Broome Community College
B.S., SUNY College at Oswego
HARRY M. WATSON, JR.
B.S., University of Scranton

AUTOMOTIVE TECHNOLOGY

WILLIAM GREENE

BIOLOGICAL SCIENCES AND MEDICAL LABORATORY TECHNOLOGY

ELSIE BICKHART
B.S., Hartwick College
SANDRA EDWARDS
A.A.S., Broome Community College
GARY FROST
A.S., A.A.S., Broome Community College
MARY M. GREENE
JOANNE KNAPP
A.A.S., Broome Community College
MILDRED KOLODZIJ
PETER W. MEYER
B.S., California State Teachers College
VIRGINIA VROBLEFSKY
A.A.S., Alfred Agricultural and Technical College

CHEMISTRY

BRENDAN FLYNN
B.S., M.S., Lowell Technical Institute
JOHN E. GRACE
B.S., University of Alabama
DAVID E. HUGHES
B.A., Ithaca College
Ph.D., SUNY at Binghamton
STUART M. JAMES
B.A., Hobart College
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CHILD CARE

LOIS BLAKE
B.S., Lebanon Valley College
SUE BRIGGS
B.S., Colorado State University
SONYA BROWN
A.A.S., Cobleskill Agricultural and Technical College
EDWARD GIEGUCZ
B.S., Pennsylvania State University
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ROBERT A. HEUBNER
ROBERT C. KULLE
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RONA PALMER
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B.S., Union College
DAVID SCHUTLE
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M.A., University of Wisconsin
Ph.D., SUNY at Binghamton

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M.L.S., University of Washington
DONALD L. PHILLIPS
B.S., Bloomsburg State Teachers College
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B.A., M.A., SUNY at Binghamton
ROBERT T. STEWART

FIRE PROTECTION TECHNOLOGY

OGDEN CLARK
JEROME FIVES

ANTHONY WINKLER, JR.
Diploma, Broome Community College

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HUMANITIES

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PRISCILLA DOLAN
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M.S., Oregon State University
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LEGAL SECRETARIAL

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B.A., Bowdoin College
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M.B.A., University of Michigan

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Ph.D., Indiana University

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J.D., South Texas College of Law
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B.S., LeMoyne College

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JOHN G. WHITTEMORE
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P.H.N., B.S.N., Syracuse University
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ELIZABETH D. DEMSKE
B.S., M.S., SUNY at Albany

JUDITH MAURIELLO
B.S., SUNY at Albany
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M.S., Rutgers University
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B.A., University of California at Santa
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M.A., SUNY at Binghamton
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B.A., M.A., SUNY at Binghamton
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B.A., Moravian College
M.E.D., Pennsylvania State University

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B.S.N., SUNY at Binghamton
JEAN LUBS
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VIRGINIA MONSERRATE
B.S.N., Georgetown University
MARY JAN MUELLER
B.S., Skidmore College
BARBARA OLNEY
B.S., Adelphi University
CAROLE L. SCHWOMEYER
Charles S. Wilson Hospital
BLENDIA SMITH
B.S., SUNY College at Plattsburgh
JANET WRIGHT
B.S.N., Syracuse University

JUANITA HARRISON
PAMELA HOFFMAN
R.T., Westfall Park Medical Center
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MARDELLE VEST
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B.S., B.A., Boise State University
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B.A., University of California
M.A., University of Michigan
JUDITH SANWALD
B.A., Erskine College
M.A., University of Florida
Ph.D., SUNY at Binghamton
EDWARD M. SCAHILL
B.S., St. Bonaventure University
M.A., SUNY at Binghamton
FREDERICK YORK
B.A., University of Connecticut
M.A., Northeastern University
Ph.D., SUNY at Binghamton

STATE UNIVERSITY OF NEW YORK

CLIFTON R. WHARTON, JR., Chancellor

Broome Community College is one of the 64 colleges that comprise the State University of New York (SUNY), which was established by the State Legislature in 1948. The 64 units include 30 locally-sponsored two-year community colleges like Broome.

The University's 64 geographically dispersed campuses bring educational opportunity within commuting distance of virtually all New York citizens. In academic 1977-78, nearly 350,000 students enrolled in its classrooms or pursued study at home, at their own pace, through such innovative institutions as Empire State College, a campus without walls.

The University is uniquely organized into a system comprised of:

Four University centers, two medical centers, 12 colleges of arts and science, a non-residential college, seven specialized colleges, six agricultural and technical colleges, and 30 locally-sponsored community colleges.

In addition to baccalaureate studies, 12 of the senior campuses offer graduate study at the doctoral level, and 22 at the master's level.

The two-year colleges offer associate degree opportunities in a wide range of technical areas. They also provide transfer programs within the University for students wishing to continue to the baccalaureate degree. In the 1977-78 college year, the community colleges enrolled more than 150,000 students, of which over 80,000 were full-time and more than 70,000 part-time. Ten Educational Opportunity Centers serve the educationally deprived by upgrading occupational skills for more gainful employment and identifying students with college potential to prepare them for enrollment in the state's public and private colleges.

State University is governed by a Board of Trustees, appointed by the Governor, which determines the policies to be followed by the 34 State-supported campuses. The 30 community colleges operating under the program of State University have their own local boards of trustees. SUNY's new motto is "To Learn-To Search-To Serve," which emphasizes The University's three-fold mission of education, research and public service.

During its brief history, State University has graduated more than 600,000 alumni, the majority of whom are pursuing their careers in communities across the state.

CAMPUSES

UNIVERSITY CENTERS

State University at Albany
State University at Binghamton
State University at Buffalo
State University at Stony Brook

COLLEGES OF ARTS AND SCIENCE

College at Brockport
College at Buffalo
College at Cortland
Empire State College
College at Fredonia
College at Geneseo
College at New Paltz
College at Old Westbury
College at Oneonta
College at Oswego
College at Plattsburgh
College at Potsdam
College at Purchase

COLLEGES AND CENTERS FOR THE HEALTH SCIENCES

Health Sciences Center at Buffalo
University Center
Health Sciences Center at Stony Brook
University Center
Downstate Medical Center at Brooklyn
Upstate Medical Center at Syracuse
College of Optometry at New York City
*College of Veterinary Medicine at Cornell University

AGRICULTURAL AND TECHNICAL COLLEGES

College at Alfred
College at Canton
College at Cobleskill
College at Delhi
College at Farmingdale
College at Morrisville

COMMUNITY COLLEGES

(Locally-sponsored, two-year colleges under the program of State University)

Adirondack Community College at Glens Falls
Broome Community College at Binghamton
Cayuga County Community College at Auburn
Clinton Community College at Plattsburgh
Columbia-Greene Community College at Hudson
Community College of the Finger Lakes at Canandaigua
Corning Community College at Corning
Dutchess Community College at Poughkeepsie
Erie Community College at Buffalo
*Fashion Institute of Technology at New York City
Fulton-Montgomery Community College at Johnstown
Genesee Community College at Batavia
Herkimer County Community College at Herkimer
Hudson Valley Community College at Troy
Jamestown Community College at Jamestown
Jefferson Community College at Watertown
Mohawk Valley Community College at Utica
Monroe Community College at Rochester
Nassau Community College at Garden City
Niagara County Community College at Sanborn
North Country Community College at Saranac Lake
Onondaga Community College at Syracuse
Orange County Community College at Middletown
Rockland Community College at Suffern
Schenectady County Community College at Schenectady
Suffolk County Community College at Selden
Sullivan County Community College at South Fallsburg
Tompkins Cortland Community College at Dryden
Ulster County Community College at Stone Ridge
Westchester Community College at Valhalla

SPECIALIZED COLLEGES

*College of Agriculture and Life Sciences at Cornell University
*College of Ceramics at Alfred University
College of Environmental Science and Forestry at Syracuse
*College of Human Ecology at Cornell University
College of Technology at Utica/Rome
**Fashion Institute of Technology at New York City
Maritime College at Fort Schuyler
*School of Industrial and Labor Relations at Cornell University

*These operate as "contract colleges" on the campuses of private universities

**While offering a limited number of baccalaureate degree programs, in addition to the associate degree, FIT is financed and administered in the manner provided for community colleges.

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COLLEGE CALENDAR FOR 1978-79

FALL SEMESTER 1978

August 21-25	Orientation and Registration
August 28	Classes Begin
*September 2	Last Day for 100% Tuition/Fee Refund
September 4	Labor Day
*September 9	Last Day for 50% Tuition Fee/Refund
*September 16	Last Day for 25% Tuition Fee/Refund
October 9-10	Columbus Day Recess
October 20	Midterm Grades Due
November 22-26	Thanksgiving Recess
November 27	Classes Resume
December 18	Last Day of Classes
December 19, 20, 21	Evaluation Period
December 26	Grades Due

SPRING SEMESTER 1979

January 15-17	Orientation and Registration
January 22	Classes Begin
*January 27	Last Day for 100% Tuition/Fee Refund
*February 3	Last Day for 50% Tuition/Fee Refund
*February 10	Last Day for 25% Tuition/Fee Refund
March 16	Midterm Grades Due
March 19-23	Spring Vacation
March 26	Classes Resume
May 11	Last Day of Classes
May 14, 15, 16	Evaluation Period
May 18	Grades Due
May 25	Graduation

*Students in classes that meet only on Saturdays will have until 12 noon on the next school day to notify the College of withdrawal and still qualify for tuition/fee refund.

MAP OF THE CAMPUS

1. TITCHENER HALL

Engineering Science and
Physics
Liberal Arts
Mathematics

2. WALES BUILDING

Admissions Office
Administrative Offices
Counseling and Student
Development Center
Office of Continuing
Education
Finance Office
Health Service Office
Public Relations Office
Student Affairs Office
Registrar's Office

3. SCIENCE BUILDING

Chemical Technology
Dental Hygiene

4. ELECTRICAL BUILDING

Electrical Technology

5. STUDENT CENTER

Book Store
Cafeteria
Gymnasium
Little Theater
Physical Education

6. MAINTENANCE BUILDING

7. THE UNION

Student Activities
Student Lounge

8. MECHANICAL BUILDING

Civil Technology
Mechanical Technology
Faculty Offices

9. CECIL C. TYRRELL LEARNING RESOURCES CENTER

Audio-Visual
Educational Technology
Library
Developmental Centers
Mathematics
Reading and Study Skills
Writing

10. BUSINESS BUILDING

Accounting and
Business Administration
Marketing
Secretarial Sciences
Computer Center
Medical Office Assistant
Medical Record Technology
Radiologic Technology

11. FACULTY OFFICES

12. 901 FRONT STREET

Nursing
Biological Sciences and
Medical Laboratory Technology

